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DETAILED REPORT OF EXPLORATIONS IN CENTRAL ASIA AND WESTERNMOST CHINA

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DETAILED REPORT OF EXPLORATIONS IN CENTRAL ASIA AND WESTERNMOST CHINA

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VOL. III TEXT

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CHAPTER XXVI

THE MARCHES OF OLD KUA-CHOU

SECTION I.—THE OASIS OF KUA-CHOU AND ITS HISTORICAL IMPORTANCE

ON June 13 I left the caves of the Thousand Buddhas with my acquisitions of manuscripts and art relics safely packed in twelve cases, and, after a rapid visit to Tun-huang town to thank my Mandarin friends for all the kindness and friendly support by which they had facilitated my labours, set out eastwards for An-hsi. Three hot marches aggregating a total distance of about 55 miles were covered on the cart road leading along the barren foot of the absolutely denuded outermost hill range of the Nan-shan before I reached Kua-chou-k'ou, a humble roadside station which derives its designation from the ancient name of the oasis and marks its southernmost outpost.[1] Departure from 'Thousand Buddhas'.

The route followed is likely to have served from the earliest times as the main line of communication. It leaves the cultivated area at a distance of about six miles from Tun-huang town and leads beyond across wholly desert ground, scrub-covered in parts and elsewhere bare gravel. The character of this ground cannot have changed greatly since the troops and caravans of Han times moved along it; for the torrent beds which break through the range of foot-hills, and in which the few wells are found, are not likely in historical times ever to have carried enough water for irrigation. Only at one point is spring water with good pasture to be found in plenty. It is at *Lu-ts'ao-kou*, where the bed of a stream debouches in a narrow gorge, draining the high outer range of the Nan-shan and passing the little oasis of Tung-pa-t'u.[2] It is manifestly to this point that we must refer an old legend recorded in the *Tun-huang lu*. It is of interest as affording indirect confirmation for the above statement that the general character of the route must have already been the same in ancient times. Route from Tun-huang to An-hsi.

That valuable little text which Dr. L. Giles has edited and translated from one of my Ch'ien-fo-tung manuscripts[3] tells us of a miraculous spring situated 'three days' journey eastward from the town of Sha-chou'. It was called 'the Êrh-shih spring' after Li Kuang-li, the 'Êrh-shih general', whose expeditions undertaken against Farghāna or Êrh-shih in 104–102 B.C. under the Emperor Wu-ti are well known from the Annals. 'In the Han period, Li Kuang-li's army, when on the march, was suffering greatly from thirst. Having prayed to the spirit of the mountain, he pricked the mountain-side with his sword, whereupon a stream of water gushed out and flowed away to the west for several tens of li into the Huang-ts'ao [Yellow Grass] Lake. At a later date there was a general who drank of the water when he was very thirsty, which caused him to fall dead beside the spring. In consequence of this the water ceased to flow, only rising up to the level of the ground. Ever afterwards, when many people came to drink, the flow of water was abundant; when few came, the supply was scanty; . . . and these phenomena continue down to the present day. Local legend of 'Êrh-shih spring'.

[1] See Maps Nos. 78, 81.

[2] For *Lu-ts'ao-kou*, 'the Nullah of green grass', see Map No. 81. c. 3. The stream of Tung-pa-t'u, usually dry in its lower course, passes west of Wang-fo-hsia and drains the range, third from the Su-lo Ho valley, which stretches north-west of Shih-pao-ch'êng; see Map No. 82. D. 1.

[3] Cf. Giles, *Tun Huang Lu*, *J.R.A.S.*, 1914, pp. 705 sqq.; also *J.R.A.S.*, 1915, pp. 41 sq.

'The Êrh-shih temple, which stood by the roadside, has long been in ruins. Stones from it have been piled up together, and to this spot travellers come with their camels and horses in order to pray for good luck. Going east, you pass into the territory of Kua-chou.'[4]

Location of spring at *Lu-ts'ao-kou.*

The indications given in this account make it, I think, quite certain that the spring meant here by the writer of the Tun-huang *Mirabilia* is the one still existing at Lu-ts'ao-kou. The position and distance there stated point clearly to it. Had I known it at the time, it would have been easy to look among or near the ruins of the little fort and station, deserted since the Tungan rebels wrecked them, for the remains or likely site of the 'Êrh-shih temple which stood by the roadside', and which was already in ruins when the *Tun-huang lu* was written, probably about the ninth–tenth century. From what I have had occasion to observe before about the tenacity of local worship in this and neighbouring regions,[5] I have little doubt that traces of the religious respect enjoyed by the spring and of the superstitious belief about its miraculous phenomena still linger to the present day. However this may be, I am able at least to bear personal testimony to the attraction which this spot still has 'for travellers [who] come with their camels and horses'. During both my halts at An-hsi, in June and October, it was to Lu-ts'ao-kou that under well-meaning local advice my camels and ponies were sent to enjoy a good rest and fat grazing—though I cannot be sure whether Hassan Ākhūn, my faithful director of transport, took the occasion also 'in order to pray for good luck'.[6]

Ancient oasis of *Kua-chou.*

The fifteen miles' ride which brought me from Kua-chou-k'ou north-westwards to the present district headquarters of An-hsi amply sufficed to show the conditions now prevailing within the ancient oasis of *Kua-chou* 瓜州.[6a] Its area presented itself as a wide scrub-covered plain, extending from the foot of the low outermost hill range of the Nan-shan to the banks of the Su-lo Ho. Within

[4] As Dr. Giles in his notes points out, this miraculous story is related in essentially the same form by the fragmentary text of the *Sha chou chih*, also recovered from the Ch'ien-fo-tung hoard.

The local legend bears a curious resemblance to the story told at length in Kalhaṇa's *Rājataraṅgiṇī*, iv. 277–306, of King Lalitāditya's expedition into the 'Sand Ocean' and the miraculous way in which he saved his army from succumbing to thirst by striking the ground with his spear and producing a stream. Kalhaṇa distinctly refers to this and similarly produced streams (*kuntavāhinī*) as being still known in his own day in the 'Northern Region'; cf. Stein, *Rājat.* iv. 306.

There can be no doubt that the folklore story reproduced by Kalhaṇa placed the miraculously produced stream vaguely in the great deserts of Central Asia, the 'Sand Ocean' clearly reflecting hearsay knowledge of the Taklamakān and the sandy wastes adjoining it eastwards. Relations between Kashmīr and the Chinese in the Tārīm Basin are distinctly attested for Lalitāditya's reign, not merely by allusions in Kalhaṇa's Chronicle, but also by definite historical records in the T'ang Annals; cf. Stein, *Rājat.*, notes on iv. 126, 211 (concerning Lalitāditya's minister *Caṅkuṇa* 'the Tukhāra', i.e. Tokharian, whose name hides the Chinese title *chiang-chün* 將軍 'general'). For the T'ang notices of Kashmīr and the imperial decree of installation granted A.D. 733 to King Mu-to-pi, i.e. Lalitāditya-Muktāpīḍa, see now Chavannes, *Turcs occid.*, pp. 166 sq., 209.

It is at this period that a popular legend originally located on the great Chinese highway near Tun-huang might most readily have found its way into Kashmir folklore across the Hindukush valleys then under Chinese political control. That the legend was widely known in T'ang times is shown by the reference made to it by the T'ang Annals in connexion with a similar incident related of a Chinese expedition in A.D. 677; cf. Chavannes, *Turcs occid.*, p. 74, note 3.

[5] Cf. e.g. above, pp. 78, 602, 696; below, p. 1095.

[6] What the *Tun-huang lu* states about the Huang-ts'ao Lake (泊 *po* of the text suggests rather a shallow marsh, according to Dr. L. Giles) into which the miraculously produced stream 'flowed away to the west for several tens of li' is in perfect accord with our identification. By the Huang-ts'ao Lake are obviously meant the very extensive salt marshes which, as my explorations of April, 1914, proved, fill most of the low-lying ground (left blank in Map No. 81. A–C. 3) between the old route along the foot of the hills and the belt of sand and clay desert south of the Su-lo Ho where the line of the ancient Limes runs. In spite of the early season I then found the western portion of these marshes, crossed from Ko-ta-ching station on the cart road (see Map No. 81. A. 4, where the name is misprinted as Lo-ta-ching), almost impassable even on foot; cf. *Third Journey in Central Asia*, *Geogr. Journal*, 1916, xlviii. p. 194. These marshes are mainly fed by the subsoil drainage of the Tung-pa-t'u stream, which comes to the surface at Lu-ts'ao-kou and to the north-west of it.

[6a] Chinese tradition seems to derive the name *Kua-chou* 瓜州, literally meaning the 'City of melons', from the fine melons there grown; see Giles, *J.R.A.S.*, 1914, p. 707. This cultivation still continues, but curiously enough is mainly carried on by Turkī Muhammadan settlers.

it extensive waste lands alternate with strips of poor fields irrigated from canals of no great size, which take off from the Su-lo Ho between the villages of Hsiao-wan and Huang-ch'ü-k'ou.[7] All the way ruins of walled villages and towns were far more conspicuous than the scattered farms and hamlets of the present occupation. Most of the former, like the walled enclosures to the north of Kua-chou-k'ou shown by the map (Lu-kung, Po-ch'i-pao), were said to have been destroyed during the great Tungan inroads. But some at least are likely to have been deserted much earlier. After passing a broad winding Nullah near the hamlet of T'ou-kung,[8] which undoubtedly represents an old bed of the Su-lo Ho, the road led through the abandoned town known as *Kua-chou-ch'êng* 瓜州城 after the ancient name of the whole oasis or district. Its walls of stamped clay form a rectangle of about one-half by one-third of a mile, enclosing but scanty remains of houses, among them those of a Ya-mên said to have accommodated the military command now transferred to Tun-huang. Outside the north gate I found a tumbled-down temple still the scene of a local festival. The town was said to have been destroyed by the Tungans, and the waste appearance of the interior pointed to its having been half-abandoned even before. But that it marks a site of some former importance, and possibly that of the ancient chief town of Kua-chou, becomes probable from its central position within the oasis and from certain archaeological indications to be discussed further on.

The 'town' of *An-hsi*.

After leaving the area of spasmodic cultivation to the north-west of Kua-chou-ch'êng, the road crosses for close on four miles an open scrub-covered plain, with bare gravel patches in places and no trace of former cultivation. Beyond this, at the eastern end of a compact stretch of tilled land, about two miles wide where broadest, and forming what is now the main oasis, the present 'town' of An-hsi is reached. In spite of its high-sounding name *An-hsi* 安西, 'the [seat of the] Western Protectorate', the same which once in the great T'ang times had been borne by the headquarters of the Chinese administration controlling the whole of Turkestān,[9] everything about the place, officially ranking in 1907 as a *Chou* or 'Independent Prefectural City', presents an air of neglect and stagnation. Scarcely more than a straggling street within a big and desolate-looking enclosure of crumbling walls, An-hsi shows plainly that it owes its importance, such as it is, solely to being the last halting-place with local supplies on the highway leading from Kan-su to Hāmi and Chinese Turkestān. After leaving the western gate of An-hsi and crossing the Su-lo Ho a couple of miles beyond, the traveller bound for Central Asia by that great caravan route enters the gravel and stone desert of the Pei-shan and does not reach arable ground again until after eleven weary marches.

Limited extent and resources of oasis.

The six days' stay, which a variety of practical tasks, including preparations for the move into the mountains south and arrangements for the safe storage of my collection of antiques, obliged me to make at An-hsi,[10] amply sufficed to show me how limited were the resources of the place and the district. The scattered hamlets constituting the main oasis in the wide scrub-covered plain were, no doubt, but slowly recovering from the terrible ravages caused by the Tungan inroads. Scarcity of population was the obvious explanation why a good deal of land capable of irrigation from still existing canals and showing clear traces of former cultivation was being left untilled to be overrun by the low scrub of the desert. Yet allowing for these human causes, it was still easy to realize from the physical aspect of the ground that the old oasis of Kua-chou could never have equalled that of Tun-huang in extent or fertility. Apart from the fact that the area between the foot-hills and the

[7] See Map No. 83. A. 2.

[8] *T'ou-kung* means literally 'the first settlement'. Such numerical designations of village areas are common everywhere on the westernmost Marches of Kan-su; cf. e.g. *San-kung*, *Lu-kung*, *Pa-kung* in the An-hsi tract (Map No. 81. C. 2, 3; D. 3). Has the prevalence of this numerical nomenclature perhaps something to do with the need of repeated re-settlement after devastating inroads which were likely to obliterate older local names?

[9] Established at Kuchā since A.D. 658 and previously at Turfān; cf. Chavannes, *Turcs occid.*, p. 118, but see also Chavannes, *Notes additionelles*, *T'oung-pao*, 1904, p. 19.

[10] Cf. *Desert Cathay*, ii. pp. 236 sqq.

river which any practicable canal system could command is limited to a triangle roughly 16 miles long and about 10 miles wide at its base, it is also certain that the facilities for irrigation furnished here by the Su-lo Ho are greatly inferior to those which are enjoyed by Tun-huang owing to the volume of the Tang Ho and the favourable position of the oasis on a large and fertile alluvial fan.

Irrigation from Su-lo Ho.

Great as the drainage area of the Su-lo Ho is, and imposing as are the glacier sources which feed it and which we were able partially to survey in August, 1907, yet much of its volume is lost by evaporation and otherwise on the wide glacis of gravel below Ch'ang-ma and on its long course through arid wastes between Yü-mên-hsien and the canal heads above An-hsi. At An-hsi itself I found, on June 19, the river reduced to the appearance of an insignificant sluggish watercourse, about 20 feet wide and less than 2 feet deep in the middle. At the same time I could see from the width of the dry bed, some 200 yards across, in which this watercourse was meandering, and from its steeply cut banks, 15–20 feet high, how great the floods are which the Su-lo Ho carries down early in the spring after the first snow melts in the mountains, and again in the late summer when the big glaciers of the Suess Range discharge their full quota. It is clear that such conditions must often interfere with the maintenance of canal heads and the provision of an adequate water-supply at the critical seasons, and difficulties on this score were acknowledged by the district officials.

Population of An-hsi district.

From the information they were able or willing to give me, it appeared that the total population of the An-hsi district was then reckoned at about 900 households. But even if this figure was not exaggerated, it must be remembered that in it were also included several small oases higher up the river, such as Hsiao-wan and Shuang-t'a-pao, as well as a few relatively flourishing villages in the lower hills, two of which I was subsequently able to visit. From all this it seems safe to conclude that Kua-chou even in ancient times must have ranked considerably below Tun-huang in economic resources and importance.

Historical connexion with Tun-huang.

This conclusion is supported by all early references to Kua-chou that are accessible to me, as they show it in close political connexion with, or dependence on, the territory of Tun-huang. Not being able to consult the special notices that the Chinese historical sources are likely to contain concerning Kua-chou, I must be content with pointing out that in Han times the command of Tun-huang must obviously have included it, and that the same may be also assumed regarding the *arrondissement* of Sha-chou 沙州, i.e. Tun-huang, which was organized in A.D. 345 by Chang Chün, a local ruler of western Kan-su.[11] With the interesting part which Kua-chou played in the story of Hsüan-tsang's start on his great journey, and to which we owe the earliest mention of the place I can trace among texts accessible to me in translation, I shall have occasion to deal presently. The reference made in the Ch'ien-fo-tung inscription of A.D. 894 to a prefect of Kua-chou who was the grandson of Chang I-ch'ao, the local chief of the Tun-huang region in A.D. 850, and whose elder brother held the prefecture of Sha-chou, proves that both tracts at that period continued to be governed by the same local family.[12] Later still the Chinese envoy Kao Chü-hui on his mission to Khotan, A.D. 938–42, found both Kua-chou and Sha-chou occupied mainly by Chinese, and both under a local chief of the Ts'ao family.[13]

In discussing above the historical records concerning the extension of the ancient Chinese Limes beyond Tun-huang, I have already emphasized the importance attaching to all oases, big or small,

[11] Cf. M. Chavannes' note on extracts translated by him from the Chin Annals, in his Appendix to *Ancient Khotan*, i. p. 543, note 4.

The Han Annals, when describing the organization of the frontier territories conquered by the Emperor Wu-ti into the commands of Chiu-ch'üan, Wu-wei, Chang-yi, and Tun-huang, do not specify Kua-chou, it being manifestly a part of Tun-huang; see Chavannes, *Documents*, p. v; above, pp. 724 sq.

[12] Cf. Chavannes, *Dix inscriptions*, p. 93; also pp. 10, 92.

[13] Cf. Rémusat, *Ville de Khotan*, p. 77; Chavannes, *Dix inscriptions*, pp. 12 sq.

which by their position along the north foot of the Nan-shan and on the line of the great route leading westwards facilitated Chinese commercial and political expansion into the Tārīm Basin.[14] Without the provisions, etc., thus available locally as far as Tun-huang, the Chinese missions, caravans, and military expeditions would have found it still more difficult than it was to prepare for, and safely overcome, the formidable obstacles presented to their progress by the sand and salt wastes of the Lop Desert. Kua-chou was, no doubt, a valuable link in this chain of oases which lay behind, and were sheltered by, the Emperor Wu-ti's extension of the Great Wall. But its local importance is likely to have considerably increased when the Chinese occupation of Hāmi in A.D. 73 opened up a new route towards the Western Regions.[15]

Position of Kua-chou on western high road.

This route, though longer than that through Lou-lan or 'the new northern Route', crossing as yet unexplored wastes of the westernmost Pei-shan, avoided the worst of their physical difficulties, want of water, and has for this reason, no doubt, remained to the present day by far the most frequented and important of all routes connecting Chinese Turkestān with Kan-su.[16] It is by following this route which connects An-hsi with Hāmi that the distance to be covered across desert ground bare of local resources is most reduced and an oasis of considerable size reached soonest. Hāmi is admirably adapted by nature to form a bridge-head, as it were, for the safe crossing of the Pei-shan, and a glance at the general map shows that by starting for it direct from An-hsi instead of via Tun-huang traffic coming from the side of China must effect a considerable saving in distance. This explains the continued use down to our day of the An-hsi–Hāmi route as the main line of communication across the 'Gobi' separating China and Central Asia, and also the special importance which old Kua-chou must have claimed as its starting-point, notwithstanding the local limitations. Nor should another consideration be forgotten. This An-hsi–Hāmi route finds its direct continuation southwards in a well-known and much-frequented route, which leads across the Nan-shan ranges by easy passes to the plateaus of Tsaidam, and thence over the Tibetan highlands straight to Lhassa.[17] Thus An-hsi lies on the most direct line of communication connecting Mongolia with Tibet, and may on this account, like Tun-huang in earlier times, lay claim to be one of the great cross-roads of Asia.

Importance of route from An-hsi to Hāmi.

Section II.—OLD REMAINS NEAR AN-HSI AND HSÜAN-TSANG'S YÜ-MÊN KUAN

In view of the importance thus attaching to the tract of old Kua-chou, I feel doubly glad that my enforced stay at An-hsi allowed time for interesting archaeological observations in the neighbourhood. My previous explorations had enabled me to trace the line of the ancient Chinese Limes to within about 35 miles west of An-hsi,[1] and left practically no doubt that it must have continued past it eastwards. Local information gave no clue to any remains of it. Some large towers, which on the march from Kua-chou-k'ou we had sighted far away to the west, were reported by Surveyor Rām Singh, whom I sent on a reconnaissance tour in that direction, to be of recent origin.[2] But on his way to the western edge of An-hsi cultivation he had come across two ruined towers on waste

Search for traces of Han *Limes*.

[14] See above, pp. 723 sq.

[15] Cf. Chavannes, *Les pays d'occident*, *T'oung-pao*, 1907, p. 10; also above, p. 732.

[16] For the route from An-hsi to Hāmi, cf. below, pp. 1141 sq.

[17] This route to Lhassa is regularly followed by pilgrims from Mongolia. It leads up the valley of the T'a-shih River past Shih-pao-ch'êng to the Kāshkar Pass, as described in *Desert Cathay*, ii. pp. 256 sqq. (see Map No. 82), and thence to Tsaidam. It was by this most direct route that in 1904 the Dālai-lāma on his flight from Lhassa made his way to Mongolia.

[1] Cf. above, pp. 605 sq.; Map No. 81. B. 3.

[2] The Surveyor's report was correct as regards the tower of *Lei-tun-tzŭ* (Map No. 81. C. 2), which he actually visited. But, when exploring this ground in 1914 from the west, I succeeded in tracing the line of the Limes wall with its here badly decayed towers to within a couple of miles of it.

ground which looked old, and when I inspected these on June 20, I soon found conclusive evidence proving that they belonged to the line of the Limes.

Remains of Limes posts.

The westernmost of these towers lies about 4 miles in a straight line to the south-west from the temple outside the west gate of An-hsi, which served as our quarters. It is situated in the broad belt of waste ground which I have mentioned already as extending from east to west between the cultivation areas near Kua-chou-ch'êng and An-hsi.[3] The tower, though badly decayed, still rises to a height of about 18 feet, on a base which erosion has reduced to about 14 feet square. In construction it shows, like the other ruined tower, closest agreement with the methods so familiar to me from the Limes remains in the Tun-huang desert, solid layers of stamped clay being used with an inner framework of Toghrak posts. The fact that, in spite of having been cut right through in the centre from east to west by sand-scouring, it still stands upright is the best proof of the solidity of construction. Dark-grey potsherds of the Han type, showing mat marks, lay around the foot of the tower and attested its antiquity.[4] The same were found also on a low mound, about 32 feet long and half as wide, which adjoined on the south and contained the foundations of walls built with sun-dried bricks, evidently of quarters. No other remains survived on this ground exposed both to wind-erosion and to moisture.

Line of ancient border wall traced.

But as I proceeded to the next tower about a mile off to the east, the soil turned from scrub-covered loess to fine gravel bearing only scanty vegetation, and here from about half-way onwards the straight mound marking the direction of the ancient border wall could be traced quite clearly. It rises to a height of about 4–5 feet, and, where a cutting was effected close to the eastern tower, proved to contain irregular layers of Toghrak branches embedded in gravelly earth. This tower is in better preservation, standing to a height of 22 feet on a base about 17 feet square. Here, too, broken Han pottery was picked up at the foot of the tower as well as on a clay mound about 55 yards off to the south. This mound measures about 28 by 16 feet and rises to *circ.* 8 feet above the level ground. The clearing of its top and slopes only yielded more remains of pottery of the Han type besides layers of decayed straw. From this point the straight line of the wall was traceable eastwards without any difficulty over most of the distance, about $1\frac{1}{4}$ miles, which lies between the tower last mentioned and the high-road to An-hsi. The ground here consists of bare gravel, and to this fact, no doubt, the preservation of these traces of the Han wall is due. Elsewhere to the east and west of the stretch described it is scrub-covered loess, where moisture and vegetation were bound to destroy the remains of the *agger* much more effectively. When revisiting this ground in October, 1907, I found in fact considerable portions of the scrubby waste west of the cart road flooded from the spillage of canals.

Limes line crossed by high road.

Where the line of the Limes strikes the main road from Tun-huang to An-hsi there stands a much-restored tower built, with its modern outer masonry of vertically placed bricks, in the usual shape of a truncated cone.[5] Immediately adjoining it on the south is a small reception-hall such as is invariably to be found at points some distance from district headquarters where Chinese etiquette demands that officials arriving or parting should have their formal welcome or farewell, with tea, etc., by the roadside. There, too, rise five small towers in a row, the regular mark of the usual main stages on Chinese high roads. That the core of the large tower, standing exactly on the line of the

[3] For the exact position of these Limes remains, see Map No. 81. D. 2.

[4] The following are specimens of such potsherds:

An-hsi. 001. Fr. of pottery, hand-made, of grey clay, the outer surface flared to light red. Fired on an open hearth; flat, like a tile. Gr. M. 3″.

An-hsi. 002. Fr. of pottery, hand-made, of fairly well-levigated clay, dark grey, burning to dull red; fired on an open hearth; outer surface blackened by 'smothering'; mat-marking outside. Gr. M. 2″.

[5] The tower is marked on Map No. 81. D. 2 with the name *Wei-yüan-tun*. The word *tun* 墩 is regularly applied on the Kan-su marches to P'ao-t'ais or watch-towers. If *Wei-yüan* is here the well-known Chinese term for official inspectors or commissaries, the origin of the local name is plain.

Limes wall, and at what might be called the regulation distance from the ancient watch-tower to the west, was probably of ancient origin was an inference which readily suggested itself. That local tradition of some kind had influenced the selection of this exact spot where the road crossed the line of the Limes, for what Chinese convention treats as the mark of a district headquarters boundary, seemed also likely enough. But only on my return here on the occasion of my visit to An-hsi in April, 1914, did I notice that close to the tower there stood also a modest little shrine, evidently owing its existence not to any requirement of official etiquette, but to a motive far more effective—tenacity of local worship. As explained above,[6] my explorations of 1907 and 1914 have shown me again and again that wherever roads or tracks still frequented pass through the line of the ancient Great Wall some mark of continued local worship almost invariably survives. So I see no reason to doubt that the same was the case here, too, and that it was the pious tradition clinging to this spot which led to its being also chosen for the ceremonies of official welcome and farewell.

Limes line continued east of An-hsi.

Beyond to the east the trace of the line of wall has completely disappeared on the soft scrubby soil. But at a distance of about a mile from the road I found what perhaps is the last remnant of a badly decayed watch-tower in the shape of a small but solid clay mound, some 8 feet high and 5 feet in diameter. There were no indications here to guide me in a search for the further continuation of the Limes. But on June 24, when marching to Ch'iao-tzŭ, I came upon its line again some 7 miles away to the east-south-east, as will be related below, not far from the gravel glacis of the foot-hills.[6a] Why the ancient border wall should have been erected on a line which left the arable land around the present An-hsi and lower down outside its protection is a question which cannot be definitely answered. Possibly the Su-lo Ho then followed a course which lay further to the south and by its inundations rendered it advisable to keep the Limes line some way off on slightly higher ground. In any case the same observation applies to the whole of the Limes between An-hsi and Tun-huang. Its line keeps well away from the river along the section T. xxvi–T. xxxv which has been described above,[7] and my explorations of 1914 have proved the same also with regard to the remaining portion of the wall that links it up with the traces of the Limes near An-hsi.

Ruins of walled town near An-hsi.

Apart from these remains of the Limes, the ruins of a walled town about a mile and a half to the south-south-east of the present An-hsi were of archaeological interest, notwithstanding their relatively recent date. According to local information, which Ên T'ai-chin, the district magistrate, confirmed, this earlier site of An-hsi town had been deserted towards the close of the eighteenth or the beginning of the nineteenth century after repeated destruction by fire. The interior proved to be absolutely clear of structural remains, just like the barren waste of fine gravel in which the enclosing walls rise. These form a square of about 600 yards and are solidly built of stamped clay, with a thickness of about 15 feet (Fig. 239). There was nothing to indicate that they were of considerable age, and in any case they are likely to have been kept in tolerable repair until the town was abandoned. The more striking was the extraordinary effect which wind-erosion has produced upon them. The east face, and to a somewhat lesser extent also the west, has been breached at short intervals by deep fissures due solely to the scouring of wind-driven sand. These breaches reached down in many places to within 5–6 feet of the ground, and at the north-east corner, shown by Fig. 239, had been carried down so low that the wall there has been razed off altogether.

Walls breached by wind-erosion.

It was easy to study here in full clearness the results which the action of the powerful winds, rarely ceasing at An-hsi for more than a few days, is capable of achieving where there is nothing to stop or reduce the force of their corrosive weapon, the drift-sand. It was obviously the prevalent east or east-north-east direction of these winds which accounted for the cuttings being always broader on the east than on the west face of the wall, thus presenting the appearance of trumpet-shaped

[6] See above, p. 602. [6a] See below, pp. 1099, 1039 sq. [7] Cf. above, pp. 604 sqq.; Map. No. 81. A, B. 3.

troughs which narrowed towards the bottom. One measured cutting of average size was 13 feet deep and 8 feet broad on the east side, while on the west it narrowed to a few inches at its bottom. It is here that the concentrated force of the wind can apply itself with most effect to driving ahead the drift-sand and thus widening and deepening the breach. The drift-sand that is moved forward to the attack of the walls does not lie to any great height on their outside, and most of the gravel surface a little way off is quite bare there. But, once driven through these troughs, the sand accumulates under the shelter of the west or lee side of the eastern face of the wall, rising to dunes 18–20 feet in height. Whatever drift-sand is not retained by these sheltered dunes, or else released from them by particularly violent winds, is subsequently carried across the bare interior of the walled enclosure to be used afresh for its work of destruction on the west wall.

Progressive effacement of east and west walls.

It is certain that the work of erosion thus proceeding on the east and west walls, which face the prevailing winds, tends gradually to join up the individual breaches and is bound in the end to efface these walls altogether. On the other hand, I convinced myself that the north and south faces of the walls, which lie parallel to the direction of those winds, have so far not suffered damage to any appreciable extent. Thus, if the erosive action now at work here continues long enough, the walled enclosure of this deserted town will after the lapse of some centuries present a precise pendant to that of the ancient Chinese station of Lou-lan, where the east and west walls have practically disappeared altogether, while I could still discover the traces of those to the north and south.[8] It was, in fact, by the observations here gathered that I was first led to the right explanation of the features which on my first visit to that site had puzzled me greatly.

Varied progress of erosion.

At the same time there was occasion to note here significant modifications affecting the progress and result of wind-erosion. Thus it is worth mention that the semicircular bastion in the front of the east gate of the abandoned town—a usual feature in Chinese fortification of recent times—has nowhere been breached, though in a few places its foot has been undercut by sand-scouring. Evidently the rounded exterior here presented by the wall suffices to reduce the effect of the scouring by diverting the drift-sand sidewise. That the surface conditions of the immediate vicinity are a factor of considerable importance in determining the extent of wind-erosion, even where the atmospheric conditions are identical, was brought home by a comparison of To-p'o-ch'êng, another but smaller ruined town, about 6 miles to the south-west of An-hsi. Though completely abandoned since the outbreak of the Tungan rebellion, if not earlier, this place showed practically no effect of wind-erosion on its walled enclosure. The explanation seems to lie in the fact that To-p'o-ch'êng, though situated on ground without present cultivation, is protected eastwards by the abundant low scrub which overruns the waste around and prevents the approach of drift-sand.

Wind-eroded modern town walls.

An instructive illustration of the last remark, but in the reverse sense, is afforded by the walls of modern An-hsi itself. The town is surrounded on most sides by cultivation of some sort. But just on the east there approaches a belt of waste land with light drift-sand brought, no doubt, from the river bed and but loosely held by struggling vegetation. So it was scarcely surprising to find that the eastern town wall was in danger of falling through the onslaught of that relentless foe, the famous 'wind of An-hsi'. In order to prevent the top being breached by sand-scouring, this particular face had been protected, probably since the reconquest after the Muhammadan rebellion, with a solid stone parapet. This had served to some extent to ward off the attack above, though even thus a big dune, some 15–20 feet in height, had formed on the inside of that wall. But, baffled in its usual line of assault, the sand driven by the east wind was now asserting its destructive force on the clay rampart below, and in many places the undercut wall threatened to tumble before long together with the stone parapet.

[8] Cf. above, pp. 386 sqq.

I may note here at the same time that, notwithstanding the force and persistence of the winds and the abundant supply of drift-sand close at hand, the ground around An-hsi, as far as I saw it, showed nowhere those most characteristic effects of wind-erosion, the Yārdang trenches of the Lop Desert, or that general lowering of the ground level so noticeable at old sites along the southern edge of the Taklamakān. The probable explanation is afforded by the gravel beds which underlie the riverine loess of the surface at no great depth, and further by the cover of vegetation, which is sufficient to protect the soft surface soil in most places. This vegetation itself, which prevents or retards deflation such as has long overtaken the desert ground west of the Tun-huang oasis, is, no doubt, kept alive mainly by subsoil water and occasional flooding from the Su-lo Ho. But from what personal experience and archaeological indications showed me, I have reasons to believe also that the atmospheric conditions about An-hsi are less arid than in the Tun-huang region, and that eastward from the latter a slight but steady increase in local precipitation may be looked for in the Su-lo Ho valley and in the tracts beyond it towards Su-chou.[9]

Winds and atmospheric conditions at An-hsi.

Having stated such direct observations as my stay at An-hsi allowed me to gather regarding the traceable remains of the tract and the geographical facts bearing upon its past, I may now turn to the examination of a record which concerns the historical topography of old Kua-chou. It is the only one accessible to me, and may claim particular interest because it emanates from Hsüan-tsang and is very closely connected with a very memorable event of his life. I mean his adventurous start from the borders of the Empire for the Western regions. The *Life* of the great pilgrim tells us how, with the avowed object of 'reaching the land of the Brahmans in search of the Law', he left Liang-chou, apparently towards the end of A.D. 629, and arrived at Kua-chou.[10] On inquiring about the Western routes the Master of Law was told: 'At rather more than fifty li from here, marching to the north, one comes to the river Hu-lu 瓠𤬪, of which the lower course is wide and the upper one very contracted. It is full of eddies and rapids, and is too deep to be forded. On this river the Yü-mên barrier has been established, by which one is obliged to pass and which is the key (literally 'throat') of the Western regions. To the north-west, beyond this barrier, there are five signal-towers where the guards entrusted with keeping the look-out reside. They are a hundred li apart one from the other. In the space which separates them there is neither water nor herbage. Beyond these five towers there lie the desert of Mo-ho-yen and the frontiers of the kingdom of I-wu.'[11]

Historical topography of *Kua-chou*.

I must refer to Julien's version for the touching account given in the *Life*, which tells us how the eager pilgrim, encouraged by auspicious dreams and omens—and with the connivance of the local governor who for piety's sake agrees to close an eye, *more Sinico*—prepares to evade the official prohibition against his crossing the border and to venture into the dread desert beyond. What concerns us here is the location of the Yü-mên barrier as it existed at the time, and any other indications that Hsüan-tsang's story may furnish as to the old topography of Kua-chou and the route leading from it to Hāmi. After having secured from an aged 'barbarian' a horse recommended for having done the journey to I-wu fifteen times to and fro, we are told that he started with a sole companion, another 'barbarian', at night.[12]

Hsüan-tsang's start from Kua-chou.

[9] Cf. *Desert Cathay*, ii. pp. 239 sq.

[10] I am reproducing the passage of the *Life* from Julien's translation (Julien, *Vie de Hiouen-Thsang*, p. 17) in accordance with certain corrections which Dr. L. Giles has kindly indicated. See also Beal, *Life of Hiuen Tsiang*, p. 11.

[11] Julien transcribes the name *I-'gou*, without showing the Chinese characters in the Index of *Mémoires*, ii. Beal reproduces the name in the same form. The name in the text is *I-wu* 伊吾, the designation of Hāmi in T'ang times. For *I-wu* and *Mo-ho-yen* (the form as corrected by Julien, *Mémoires*, ii. p. 516, instead of *Mo-kia-yen* which Beal repeats), see below, pp. 1144, 1149.

[12] Cf. Julien, *Vie*, p. 21. The mention of this experienced equine wayfarer seems to me to give a distinct touch of reality to the story as recorded in the *Life*. Together with other points which I shall have occasion to mention when I discuss below, pp. 1143 sqq., the details told of Hsüan-tsang's adventurous march through the desert, it creates a presump-

Hsüan-tsang's crossing of Su-lo Ho.

'In the third watch they came to the river, and sighted the Yü-mên barrier from a distance. At 10 li above the point where the barrier stood, the river banks were not much more than a *chang* (10 feet) apart.'[13] Here a crossing was effected by a rough footway which the young barbarian improvised with cut tree-branches, etc. After resting by the water's edge and having discharged the young 'barbarian', who was unwilling to venture further, the pilgrim bravely set out alone on the track leading to the first watch-tower. We shall follow him on this venture in a subsequent chapter, and show that there is good reason for believing that his track could not have lain far away from the present caravan route connecting An-hsi with Hāmi.[13a]

Local data in Hsüan-tsang's *Life*.

From this short account and the local information previously given to Hsüan-tsang we gather the following topographical data. Starting from the town of Kua-chou, the route towards Hāmi first led north for 50 li to the river Hu-lu, where the watch-station of *Yü-mên kuan* was placed. From this point the route towards Hāmi turned to the north-west and passed into the desert. Hsüan-tsang, having to avoid the watch-station where his unauthorized move beyond the border would have been stopped, set out from Kua-chou at night and reached the river in the third watch at a point some 10 li above the Yü-mên barrier, and there managed to effect a crossing unperceived. Thence he picked up the track leading to the nearest of the watch-towers, at which, as we are told in the *Life*, he arrived after covering 80 li.[14]

Topographical data verified.

It is easy to see that these indications are in full accord with the topographical facts as the map shows them. By the river *Hu-lu* no other but the Su-lo Ho can be meant.[15] From the ruined town of Kua-chou-ch'êng, which in view of its central position and surviving local tradition may safely be assumed to mark the approximate site of the *Kua-chou* of T'ang times,[16] it is 8 miles almost exactly due north in a straight line to the point where the present road to Hāmi crosses the Su-lo Ho. If we assume that its course lay in Hsüan-tsang's days about two miles further to the north, where Rai Rām Singh's reconnaissance survey marks an old river-bed,[17] the agreement in distance with the 50 li of the *Life* becomes still closer; for the equation of 5 li to the mile is the one which my experience of Hsüan-tsang's distance reckonings on Central-Asian ground has proved to be the generally correct average.[18] That the road to Hāmi, after leaving the Su-lo Ho, leads steadily in a north-west direction is a fact which the map clearly demonstrates. Finally it is noteworthy that the 80 li which Hsüan-tsang is said to have covered from the river crossing to the first watch-tower agree remarkably well with the 16 miles or so which Map No. 81 shows between

tion in favour of the substantial veracity of the account as handed down by his biographers. We shall see that the story attributes a considerable share in the pilgrim's ultimate escape from dying of thirst and exhaustion in the desert to the local sense of his mount. Of this local instinct of horses accustomed to desert travel I have had ample personal experience, and I am therefore inclined to believe that the specific reference made to this much-travelled animal is based on a matter-of-fact feature of Hsüan-tsang's adventure.

At the same time, the way in which the *Life* connects the acquisition of this useful mount, 'of russet colour and lean', with a prognostic received long before shows the same intermingling of sense of reality and naïve credulity which characterizes Hsüan-tsang's personality throughout his own *Mémoires*.

[13] I reproduce here the passage according to the interpretation which Dr. L. Giles has indicated to me as the correct one. Julien's version would imply that this point where the crossing was made was at the barrier itself. But this obviously cannot be the sense intended, since the passage had to be effected secretly.

[13a] See below, pp. 1143 sqq.

[14] Cf. Julien, *Vie*, p. 24.

[15] The identification with the Su-lo Ho, the Bulungir of the Mongols, had already been made correctly by V. de Saint-Martin; cf. Julien, *Mémoires*, ii. p. 262.

[16] In the same way the Tun-huang district has retained its administrative centre in the immediate vicinity of the Sha-chou of T'ang times. See above, p. 608; also p. 1091.

[17] See Map No. 81. D. 2. I regret that delay in starting from An-hsi prevented my examining this old bed when I passed it on Oct. 8, 1907. I regret still more that I did not make a reference to the account of the *Life* during my busy stay at An-hsi.

[18] Cf. above, p. 649, n. 12; p. 716, n. 10. It must be remembered also that Hsüan-tsang's reckonings relate to actual marching distances, not to direct distances measured on the map.

the above-mentioned old bed and the first halting-place, Pei-tan-tzŭ, with its spring, on the present caravan road.

Position of Hsüan-tsang's *Yü-mên kuan.*

As to the exact position of the Yü-mên barrier, as established at the time of Hsüan-tsang's departure, I am unable to state anything definite. Whether traceable remains of such a watch-station could survive in the immediate vicinity of a river-bed subject to changes is doubtful. At any rate my Limes explorations have solved the question as to the original position of this famous frontier station, once far away to the west of Tun-huang, and there is reason to believe that even in Hsüan-tsang's time its transfer to the north of Kua-chou could not have been of old date. A passage of the T'ang Annals referring to the dispatch in A.D. 610 of the famous Chinese commissioner P'ei Chü to Yü-mên kuan distinctly places this frontier station at the town of Chin-ch'ang 晉昌.[19] Chinese antiquarians seem to agree in considering Chin-ch'ang as a sub-prefecture dependent on Kua-chou and situated to the east of the present An-hsi.[20] But its exact position still remains to be determined. In any case it is clear that the Yü-mên barrier in A.D. 610 was not where Hsüan-tsang found it twenty years later. In the interval it may have been advanced to the west, in conformity with the resumption of Chinese political activity in Central Asia, which commenced soon after the accession of the T'ang dynasty (A.D. 618). How long it remained near Kua-chou, and when and how the present Yü-mên-hsien, between An-hsi and Su-chou, came by its name, derived from the ancient frontier station, are questions which must be left for future inquiry.

Frontier 'barrier' at *Chin-ch'ang.*

SECTION III.—THE RUINED SITE NEAR CH'IAO-TZŬ

March across outermost Nan-shan hills.

On June 24, 1907, I was able to leave desolate wind-swept An-hsi for the high mountains south-eastwards. Before beginning there what was to be my geographical work of the summer, I arranged to visit *en route* two sites in the outer hills of the Nan-shan which held out promise of archaeological interest. My immediate goal was a ruined town to the south of the village of Ch'iao-tzŭ about which a Turkī Muhammadan trader at An-hsi had first given me information, necessarily of the vaguest character. The position of Ch'iao-tzŭ itself was quite uncertain, that part of the lower hills within the great bend of the Su-lo Ho not having been visited by any European traveller. For an account of the long and, owing to fairly heavy rainfall, somewhat trying march which brought me to Ch'iao-tzŭ, I may refer to my Personal Narrative.[1] This march took us across the outermost and absolutely barren range of the Nan-shan. It was on approaching its foot, south of the hamlet of Huang-ch'ü-k'ou, that I first discovered that short but well-defined stretch of the ancient Limes which assured me of the extension of its wall-line beyond An-hsi, and to which I have already referred in the preceding section. As I could not examine it closely until my return journey from Su-chou to An-hsi, I leave its description for the next chapter.[2]

Position of Ch'iao-tzŭ.

The village of Ch'iao-tzŭ proved to be the chief place of a small but very fertile oasis situated within a wide grassy plain which fills here the bottom of the broad valley dividing the two outermost

[19] See Chavannes, *Turcs occid.*, p. 18.

[20] Cf. the references given by M. Chavannes, *Turcs occid.*, p. 18, note 3; *Dix inscriptions*, p. 67, note 2; p. 93, note 8.

Learned local opinion, as communicated to me by An-hsi officials, placed Chin-ch'ang to the west of Yü-mên-hsien (Map No. 85. A. 3). I regret that I did not ascertain the exact position meant, and still more that I did not follow up the point locally on my way from Yü-mên-hsien to An-hsi.

The Ch'ien-fo-tung inscription of A.D. 894 speaks of Chin-ch'ang as a 'strategic point' (Chavannes, *Dix inscriptions*, p. 93) where a prefect of Kua-chou earned distinction by his bravery. This has suggested to me that some place near the foot of the Wan-shan-tzŭ spur, where the high road from An-hsi to Su-chou passes a defile of the Su-lo Ho (Map No. 83. B. 2), might be intended. Regarding the suitability of this position for a frontier watch-station guarding the great route, see above, p. 727. The large fortified station at Bulun-gir, to the east of it, now mostly in ruins, served this purpose until relatively recent times.

[1] See *Desert Cathay*, ii. pp. 242 sqq.

[2] See below, pp. 1139 sqq.

ranges of the Nan-shan.[3] Together with its outlying hamlets, Ch'iao-tzŭ probably counts fully two hundred households, and the picturesque walled enclosure within which the main village shelters, together with numerous temples and other substantial structures now half in ruins, proves that the oasis must have been a far more populous settlement before the havoc wrought during the Tungan rebellion. It owes its existence solely to the abundance of fine springs which come to the surface in the extensive marshes to the south and south-west of the main oasis.

Grazing grounds in Ch'iao-tzŭ valley.

Besides assuring plentiful irrigation to the area cultivable by the present population, the water-supply from these and other springs accounts for the luxuriant grazing to be found over an area which can safely be estimated at not less than 150 square miles. The valley must have been an attractive winter grazing ground for any non-Chinese race once established in this region, nomadic or semi-nomadic, such as the Yüeh-chih or Hsiung-nu, before the Chinese advance to the westernmost Kan-su marches drove them northward. Tibetans, Uigurs, and Tanguts must also have appreciated its advantages, in conjunction with the grazing to be found in the higher valleys to the south, while their hold over these parts lasted. But Chinese deep-rooted aversion to the herdsman's life and calling leaves this rich grazing wholly unused now, and the traditional dread of nomadic neighbours, kept alive by sad experience down to Tungan and Tangut raids, jealously prevents access to it by those who could use it. There are similar winter grazing areas to be found also in places along the foot of the Nan-shan further east towards Kan-chou and beyond, and this geographical fact deserves to be emphasized here; for the historical student must keep note of it if he wishes to account for the successive domination of westernmost Kan-su by races which were essentially nomadic. Their prolonged occupation would have been physically impossible if the whole of this region had been either such utterly barren desert as the wastes west of Tun-huang and north of the Su-lo Ho, or else capable of supporting human existence only where irrigated and tilled by a laborious settled population, as is the case practically everywhere within the plains of the Tārīm Basin.

Physical features of *So-yang-ch'êng* site.

The physical features of the ground on which I found the reported 'old town' to be situated also presented distinct interest. The site proved to be a large one, and very instructive in several respects. Its remains are scattered over an area extending, as the map shows (No. 83. B. 3, 4), for about five miles from east to west and for over three miles from north to south at its eastern end. Proceeding due south of the walled village of Ch'iao-tzŭ, one crosses cultivation for about a mile, and then for nearly three miles more a belt of luxuriant vegetation fed by marshy springs. Beyond the southern edge of this, and screened by a narrow zone of tamarisk-cones, there stretches the ruined area, partly undergoing wind-erosion and partly overrun by low dunes which tamarisk growth and reeds are binding in places. After crossing for another mile ground which closely recalled to me that of familiar 'Tatis' in the Khotan region, I reached the conspicuous remains of a walled town forming an irregular quadrangle, with outer enclosures that are far more decayed adjoining on the north and west, as shown by the site plan (Pl. 46). Its position is marked β on the map. The name given for it by the Ch'iao-tzŭ villagers was *So-yang-ch'êng*.

Wind-eroded ground near ruined site.

Outside the town to the east and north-east, for a distance of 3–4 miles, scattered remains of clay-built towers and walled enclosures, together with patches of thick pottery débris from dwellings completely eroded, mark the extent of the once closely occupied area. The cultivated ground of the old oasis is likely to have spread much further. The whole of it occupies a flat stretch of fertile loess soil extending along the edge of the bare gravel glacis which slopes down from the hill range on the south. The latter is a continuation of the one which I subsequently passed on the way from T'a-shih to Wang-fo-hsia. This loess belt, wherever left unprotected by vegetation owing to want

[3] See Map No. 83. B. 3.

of surface water, has been scooped out and sculptured by the same powerful east wind which is constantly at work in the Su-lo Ho basin into small ridges and trenches invariably running east to west.[4] These reproduce the Yārdang formations of the Lou-lan area in the Lop Desert with striking fidelity, though on a smaller scale. The lesser depth of the scourings, usually between two and five feet, is accounted for by the fact that, as we shall presently see, the time that has elapsed since the disappearance of surface water and protective vegetation is here fully a thousand years less. On the other hand, the thickness of the surface layer of loess is here limited, and it is obviously due to this that I found it in places completely abraded and carried off right down to the underlying fine gravel. Much of the sand brought down originally from the detritus-covered hill range is coarse, and its corrasive action here must considerably aid deflation, i. e. wind-erosion pure and simple. The broad belt of eroded loess stretched away eastwards as far as the eye could reach, bare of all sand. But within the area of the old oasis surviving scrub has helped to retain small dunes in places, as already stated, and within the ruined town the protection still afforded by the massive walls has caused the drift-sand to accumulate in big dunes.

In connexion with the physical features just described it may be as well to state at once what my survey of the ground, rapid as it had to be from want of time, allowed me to ascertain as to the water-supply once available for the ruined town and the cultivated area near it. That it could not have been derived from the spring-fed marshes, the drainage of which irrigates the present oasis of Ch'iao-tzŭ, is certain. A look at the ground was enough to show me that all these springs lie considerably below the level of the area of deserted occupation. No clear trace of any stream could be seen from So-yang-ch'êng on the bare gravel glacis that slopes up for miles to the foot of the hill range. But when I was riding, towards the end of my visits, to the site across the wind-scoured ground to the east of the ruined town,[5] my eye was caught by a low gravel-covered ridge coming from the south-east. It proved, as expected, to carry the line of an old canal with its banks still clearly marked on the top. The coarse sand and pebbles which the water used to bring down from the foot of the hills had necessarily in the course of time helped to raise the canal bed, as noticed in every oasis from Khotan to An-hsi. Subsequently, when the canal ceased to carry water, the same heavy deposits protected it from the force of the winds which have, since irrigation ceased, been continually cutting up and lowering the ground on either side. Thus the top of the canal banks has come to lie 10–12 feet on the average above the level of the eroded ground on either side. Traces of ancient irrigation.

The line of the canal was seen to throw out several smaller branches at about one mile's distance from the ruined temple α. Thence it could be traced quite clearly up to a point about 4 miles to the south-east of the ruined town, where a solid mound of clay (marked ε in Map No. 83. B. 4) rose by its side. Beyond this the line disappeared on ground completely furrowed by Yārdangs. On the south of this eroded belt, about half a mile wide, the bare gravel glacis was seen to rise steadily, and on this no traces of the canal bed could be expected to survive. But far away in the distance to the south-east I sighted a line of white clay cliffs which suggested a river-course now dry and sunk into the gravel glacis. A broad gap seen south of it in the nearest hill range made me think that this course had been cut by the drainage from the next higher range, which, as subsequent surveys showed, rises to heights of 12,000 feet and more, and which, though carrying no permanent snow, is yet likely to receive even now at times a fair amount of moisture.[6] There could Line of ancient canal.

[4] The photograph reproduced in *Desert Cathay*, ii. Fig. 210, shows these very clearly.

[5] Fig. 238 shows a little of this in the background.

[6] I much regret that want of time and of transport suited to the season prevented the extension of survey work in this direction and the clearing up of the topographical question involved. The delineation of the hills to the south-east of Ch'iao-tzŭ, as shown in Map No. 83. B, C. 4 from Rai Rām

Evidence of desiccation.

scarcely be any doubt that it is this same drainage which, finding its way underground, now comes to light in the marshes east and south-east of Ch'iao-tzŭ. But still more obvious did it appear, in view of the conditions of the ground, that it would be wholly impossible to bring here at present adequate surface water for the irrigation of the old oasis. Hence I could not avoid the conclusion that there was clear evidence of desiccation, whether general or restricted to this region, and this gives additional interest to the archaeological facts resulting from the examination of the ruins.

Ruined walls of So-yang-ch'êng.

I may commence my description of them with the ruined town of So-yang-ch'êng already referred to. As the plan reproduced in Pl. 46 shows, the massive walls of stamped clay enclosing it form a quadrilateral which measures about 670 yards outside on the north, 493 yards on the south, and some 650 yards on each of the other faces. The walls of stamped clay vary in thickness from about 20 to 30 feet at their foot and are provided with round bastions at the corners and rectangular ones at irregular intervals along the curtains. The two remaining gates on the north and west were protected by rectangular outworks such as are still found, but usually in a semicircular shape, outside the gates of modern Chinese town walls. At the south-west corner the walls form a receding angle, and a small walled enclosure constructed within this may have been intended to serve as a reduit. There were remains of inner enclosures also on the north and south faces, but too decayed to permit of a determination of their character.

Double line of east wall.

A very peculiar feature of the ruined fortification is that it has two walls facing east, the inner built at a distance approximating 200 yards from the outer, but not quite parallel to it. The inner wall, which in Fig. 185 is seen along a great portion of its length, had been breached in many places by erosion. The result of the scouring action of wind-driven sand, corresponding here exactly to that described in the case of the deserted town south of An-hsi,[7] is strikingly illustrated by Fig. 240, which shows a section of this inner east wall of So-yang-ch'êng. But, in spite of this long-continued process of erosion, the foundations of this inner wall were still continuous, and the position of some bastions, and perhaps also of a gate near the middle, still recognizable. It was very different with the outer east wall, which had to bear the full erosive force of the winds blowing from the east. It had been practically razed to the ground in most places and was traceable elsewhere only in a line of badly decayed low segments. Taking into account the fact that the outer east wall, while undergoing erosion itself, must to some extent have afforded protection to the inner one, it is impossible definitely to assert that the better condition of the latter is necessarily evidence of later construction. Yet, remembering what I had seen at the east wall of the present 'town' of An-hsi, the thought naturally occurred to me that this inner east wall of So-yang-ch'êng had been raised for protection at a later time, when the outer had been reduced by the slow but relentless attacks of wind and sand beyond hope of repair or defence. The position of the inner wall relative to the north gate and the absence of semicircular bastions at its ends seem to support this conjecture.

Effects of wind-erosion of east wall.

Preservation of town walls north and south.

After the observations made at An-hsi it was no surprise to find that the north and south walls of the ruined town had suffered relatively little decay and were nowhere completely breached. Their direction parallel to the destructive winds, which here, too, come mainly from the east, fully accounts for their preservation, and this affords another striking illustration of the conditions prevailing at the ancient walled station of Lou-lan. Behind the shelter of the east walls drift-sand had

Singh's plane-table work, does not agree with the observation I made, as above recorded, on moving further to the south-east along the old canal line. Owing to the Surveyor's ailing condition it was impossible to assure a revision of this part of the hill sketching before our move to T'a-shih.

That the stream once irrigating the Ch'iao-tzŭ site breaks through the second outer range and receives the major part of its drainage from the third and much higher one which overlooks the Ch'ang-ma valley on the north is made probable also by the river-bed which debouches to the south-west of So-yang-ch'êng. Its valley, as observed by the Surveyor who actually crossed it at its mouth, certainly cuts through the second hill range, as Map No. 83. B. 4 shows.

[7] Cf. above, pp. 1095 sq.

accumulated within the enclosed area, and it had so far succeeded in protecting the west wall from being breached, though its top showed incipient cuttings. At the north-west corner of the walled enclosure a massive watch-tower, built of clay and containing at its foot a passage vaulted with sun-dried bricks, still rose to a height of about 30 feet. No doubt, when in the course of time the cuttings are carried down deeper, the wind will regain full play over the sand at present filling the interior and drive it out through the then breached wall westwards. Then erosion will set to work within the walls as thoroughly as it has outside, and convert the enclosed area, at present half-smothered under dunes, into an eroded 'Tati' with remnants of the north and south walls only to show that a walled town once stood here. Prospect of progressive wind-erosion.

It was interesting to note the incipient stages of this process. In the area between the outer and inner east walls the sand lay quite low, leaving the small mounds from dwellings, etc., as seen in the foreground on the right of Fig. 185, exposed to erosion. Consequently fragments of old pottery, charcoal, and similar débris were to be found here on the surface, though not in such plenty as on the completely eroded soil outside. Most of the tamarisks in the outer enclosure were dead, and the sand-cones that they held together were being disintegrated and levelled. Behind the inner east wall the enclosed area contained many tamarisk-cones with bushes still green, and near the west wall it showed even some flourishing wild poplar and Eleagnus (*Jigda*) trees. In most places the accumulated drift-sand lay to a height of from 6 to 10 feet. Only at relatively few points, where larger refuse-heaps or mounds of clay, evidently formed by the débris of completely decayed buildings, rose above the drift-sand level, could fragments of pottery, including porcelain and glazed stoneware, and bronze coins of the T'ang period be picked up on the surface. To the west of the town, both within and beyond an outer enclosure marked by traces of less massive walls, there stretched a strip of ground covered with plenty of scrub and reeds suggesting that subsoil water reached there. It probably is derived from the drainage which the dry stream bed, mentioned above as debouching to the south-west of the site, carries down from the third hill range to the south.[8] Interior of ruined town.

The porcelain and glazed pottery fragments, together with the coins picked up on my first inspection of the site, made it at once clear that regular occupation of the little town and the adjoining ground had continued down to Sung times, if not somewhat later. This fact, and the obvious decay which remains of a perishable nature must necessarily have suffered on ground still supporting vegetation, made it inadvisable to sacrifice time to systematic excavations. The heavy layer of drift-sand within the largest portion of the walled enclosure, as well as the difficulty about raising an adequate number of labourers at that season, would have protracted them too much. Experimental digging, carried out on a somewhat larger mound rising above the drift-sand towards the south-west corner of the walled area (marked in plan, Plate 46), disclosed what seemed remains of a later dwelling that had been built on the top of a great débris heap made up mainly of completely charred wood, decomposed sun-dried bricks, and stable refuse. There were indications elsewhere also that the structures occupying the town site at the time of its virtual abandonment had suffered from a conflagration. Occupation proved down to Sung times.

Complete desolation, however, does not seem to have come over the little town all at once, but as a slow lingering death. This is suggested by the fact that, while the finds of coins stop short with a piece belonging to a regnal period of the Chin dynasty (A.D. 1156–61), and the great majority of the specimens of glazed pottery detailed in the List below belong to T'ang or Sung times,[9] there are also a few fragments of porcelain to which Mr. Hobson is inclined to assign a seventeenth-century origin.[10] Considering the proximity of the site there is nothing unlikely in the statement, heard from Later visits to site.

[8] See above, p. 1102, note 6.

[8a] See Appendix *B*.

[9] See So. 0022–3, 0025–6, 0037–9, etc.

[10] Cf. So. 0034, 0044–5, 0051.

villagers of Ch'iao-tzŭ who came out to watch my proceedings, that within memory of man herdsmen grazing their ponies on the steppe northward used occasionally to seek shelter against the icy blasts of the winter in a few ruined structures evidently of later date and then still upright. There was evidence that the ruined town even at the present day saw temporary residents, people who came to collect saltpetre from the soil once occupied by buildings. Little smoke-begrimed caves at the foot of the west wall were pointed out to me as having been dug out by such humble folk for quarters.

Relic of wood-carved statue.

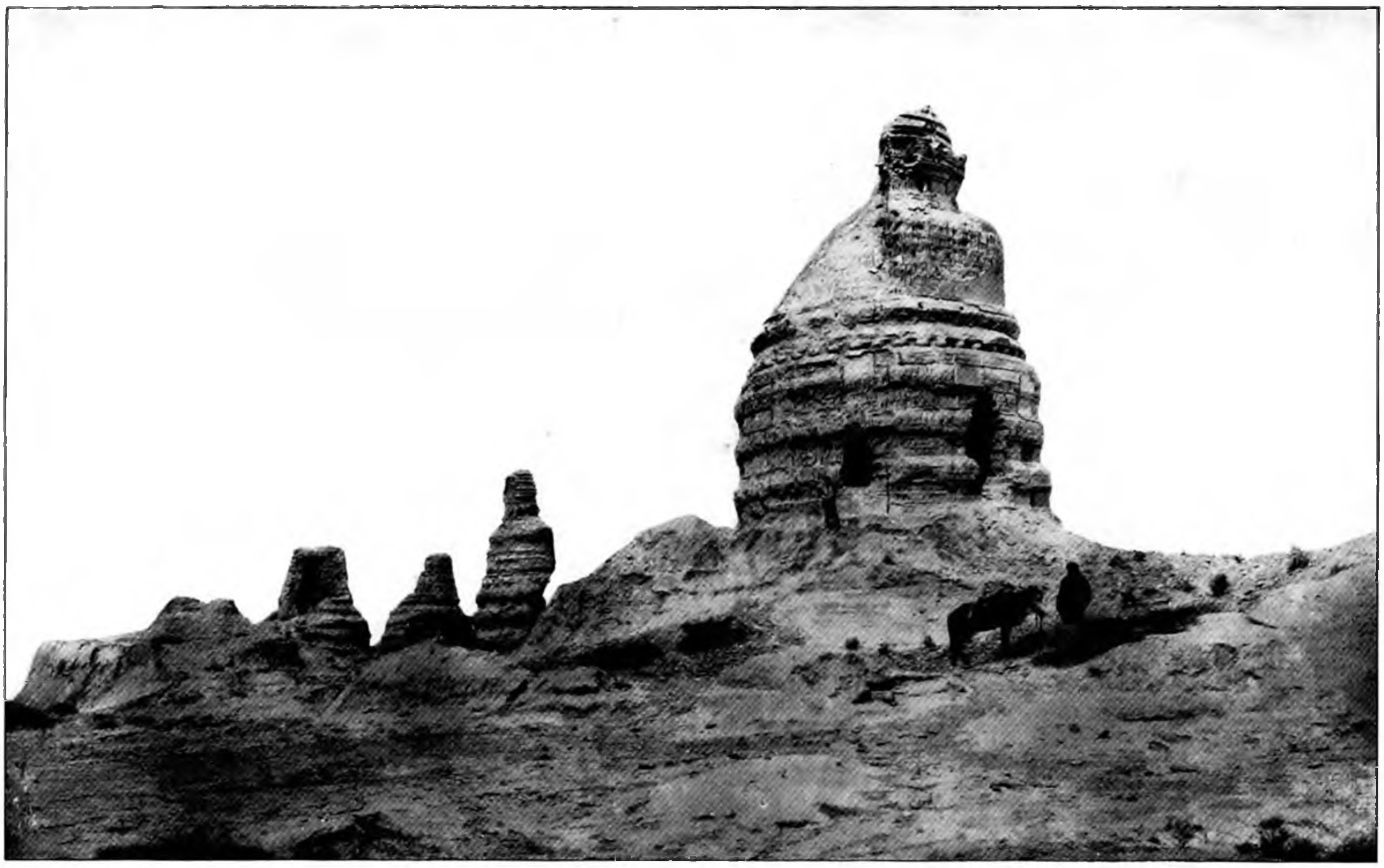
From a tiny mud-built shrine of quite modern date, which rose in front of one of these troglodyte dwellings and on what manifestly was a worked-out rubbish-heap, an interesting small antique was brought to me by the intelligent petty officer detailed to escort my party. It is the well-carved upper arm in wood, So. 009 (Plate XLVII), belonging to some statue evidently life-size, decorated in low relief with ornaments that represent the patterns of two garments. Their design, partly floral, distinctly recalls Gandhāra motifs, including the four-petalled clematis-like flower familiar from the wood-carvings of the Niya and Lou-lan Sites. At the time when it was brought to me remains of bright colouring still adhered. That the statue to which this relic once belonged must have been of early, perhaps pre-T'ang, date seems clear. Unfortunately there was nothing to indicate its original place of discovery. Even thus it suffices to show that the mounds and drift-sand within So-yang-ch'êng may yet hide objects of archaeological value, besides mere small débris of the 'Tati' type. But systematic clearing will cost time and labour.

Walled enclosures with remains of cemetery.

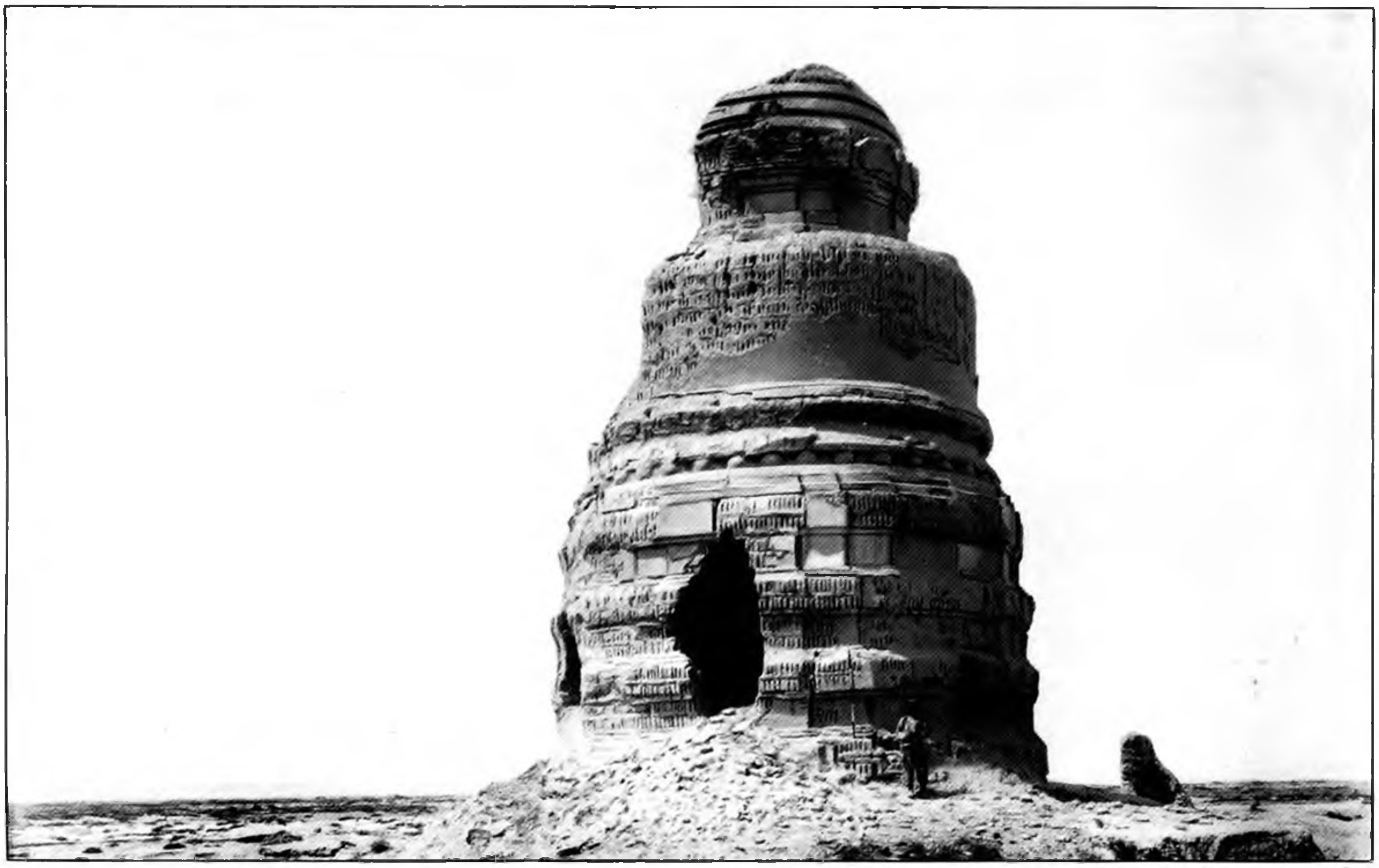
Outside the walled town to the north-west, and at a distance of about a thousand yards from its north-west corner (see Plate 46), two massive structures of stamped clay attracted my attention. From a distance they looked like small forts. But on reaching them, beyond the much-decayed remains of an outer enclosing wall on the north, I was puzzled at first by their peculiar nature. The well-built clay walls, fully 20 feet thick and rising to a considerable height, formed solid squares measuring about 70 feet on each side; they showed neither a proper entrance nor any stairs or other arrangement for reaching the interior. Having made my way into the further of these strange structures by a gap which had formed at one of its corners through the parting of the walls, I vainly searched for remains to explain its purpose until I noticed some fissured planks lying loose on the sand which half filled the enclosure. Their length was just that needed for a coffin. Subsequent scraping of the sand revealed in one corner similar planks still *in situ*, with badly decayed remains of a skeleton between them. It was clear that these remarkably massive walls had been intended to protect an abode of the dead. They might have long defied wind-erosion, but evidently failed to keep out the sand—and intruders in search of treasure. I was unable to ascertain how the enclosure was originally entered. Inspection of the surrounding ground, where it had been left bare by drift-sand and consequently eroded, showed that the whole of it had served as a cemetery. But of the graves and their contents erosion had spared nothing but small fragments of human bones.

Ruined Stūpa east of *So-yang-ch'êng*.

The most striking individual structure of the site is, however, the large and once elaborately decorated Stūpa, marked *a* on the map. It rises on a terrace, partly artificial, partly due to erosion around, less than a mile to the east of the outer east wall of So-yang-ch'êng. Fig. 238 shows it from the south, while in Fig. 237 it appears as seen from the south-west along with some of the smaller Stūpas which adjoin it in a row to the north and north-east. The damage caused by the large cuttings which treasure-seekers had made into what represents the upper base, and the destruction of much of the thick coating of hard yellow stucco once covering the whole, made accurate measurements difficult within the available time. But the photographs will suffice to show that in shape and proportions this Stūpa differs considerably from those I have had occasion to examine in the Tārīm Basin, and manifestly represents a later type. On a lower base, apparently square and

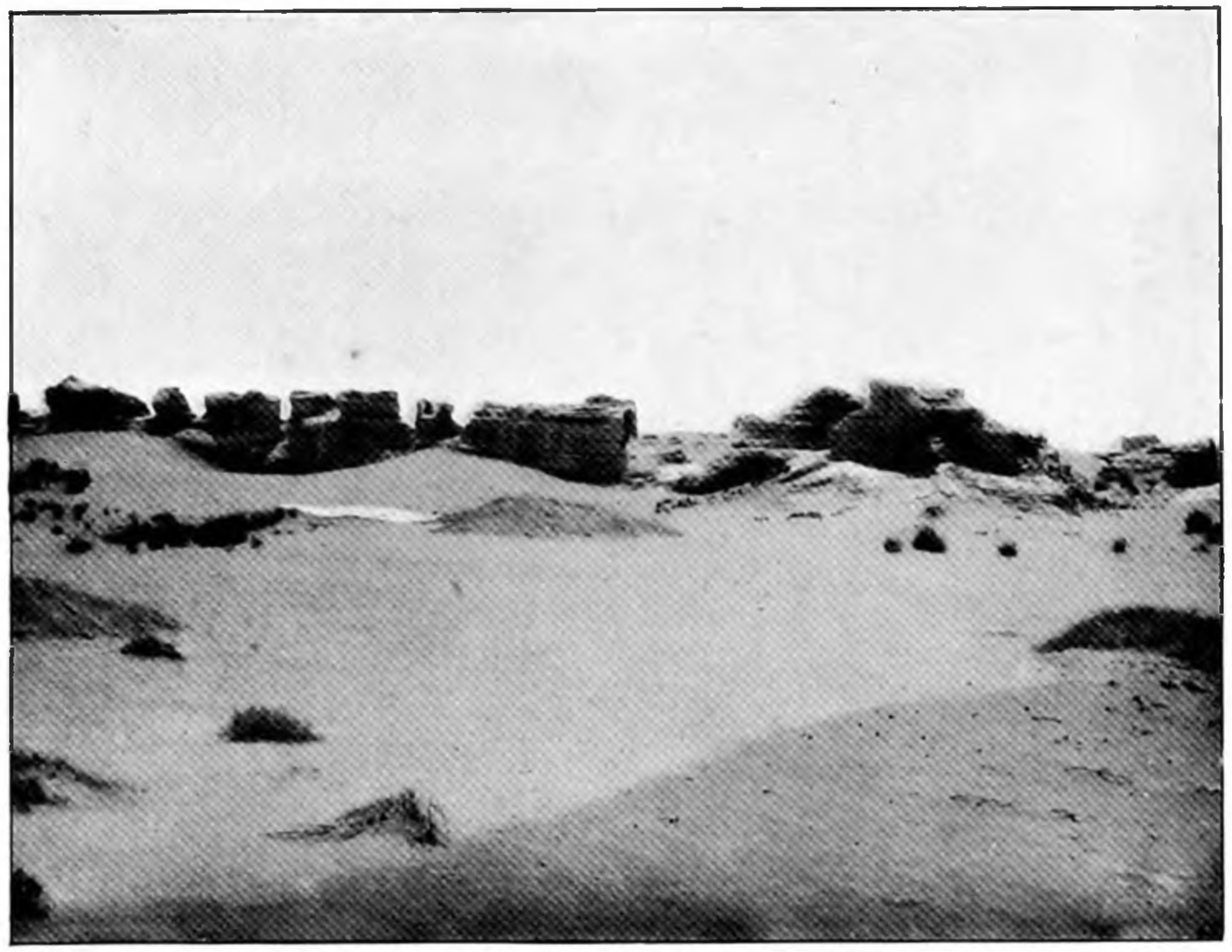


237. REMAINS OF RUINED TEMPLE AND STŪPAS, EAST OF SO-YANG-CH'ÊNG, SEEN FROM SOUTH-WEST.



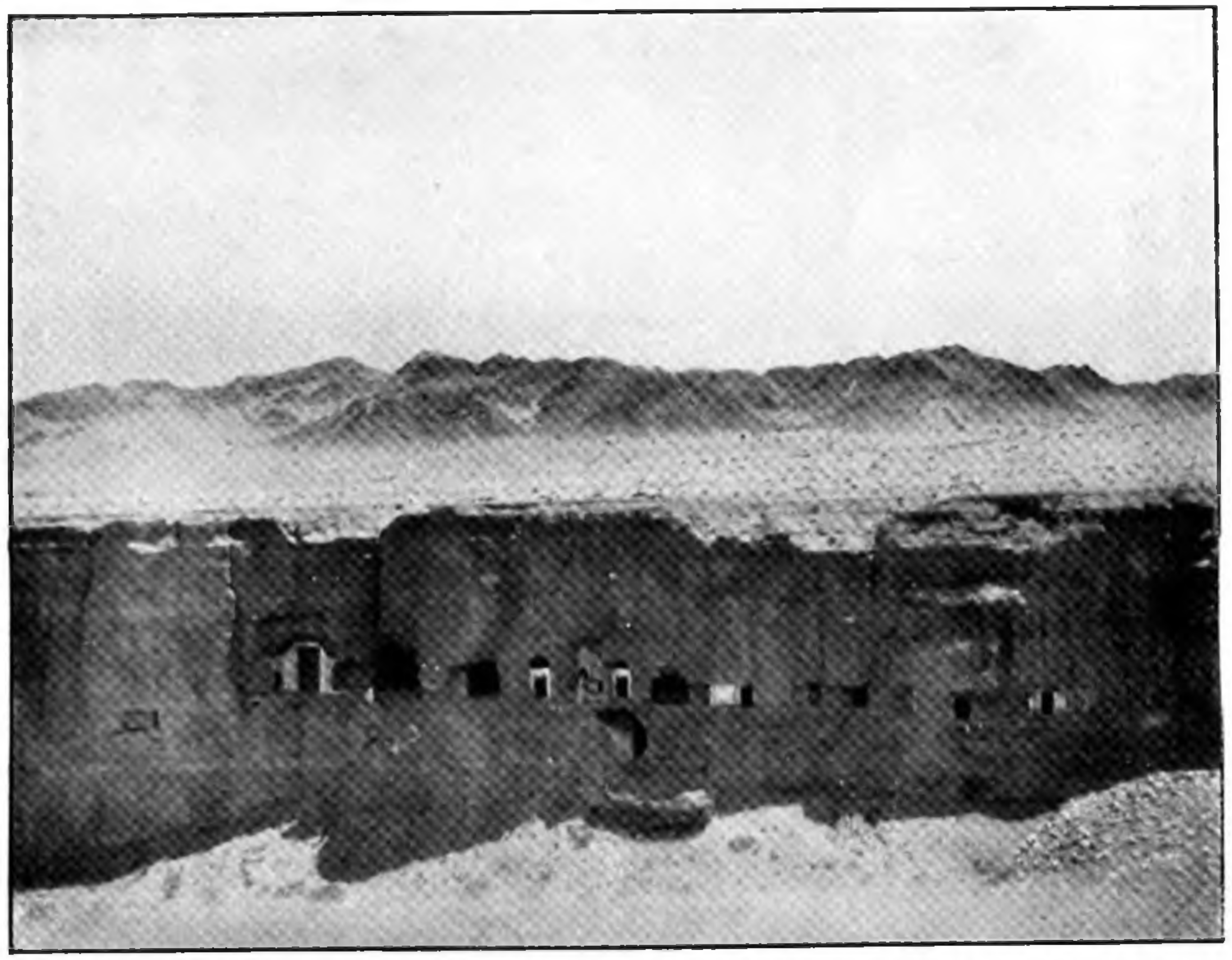
238. RUIN OF MAIN STŪPA, EAST OF SO-YANG-CH'ÊNG, SEEN FROM SOUTH.

P. 1104

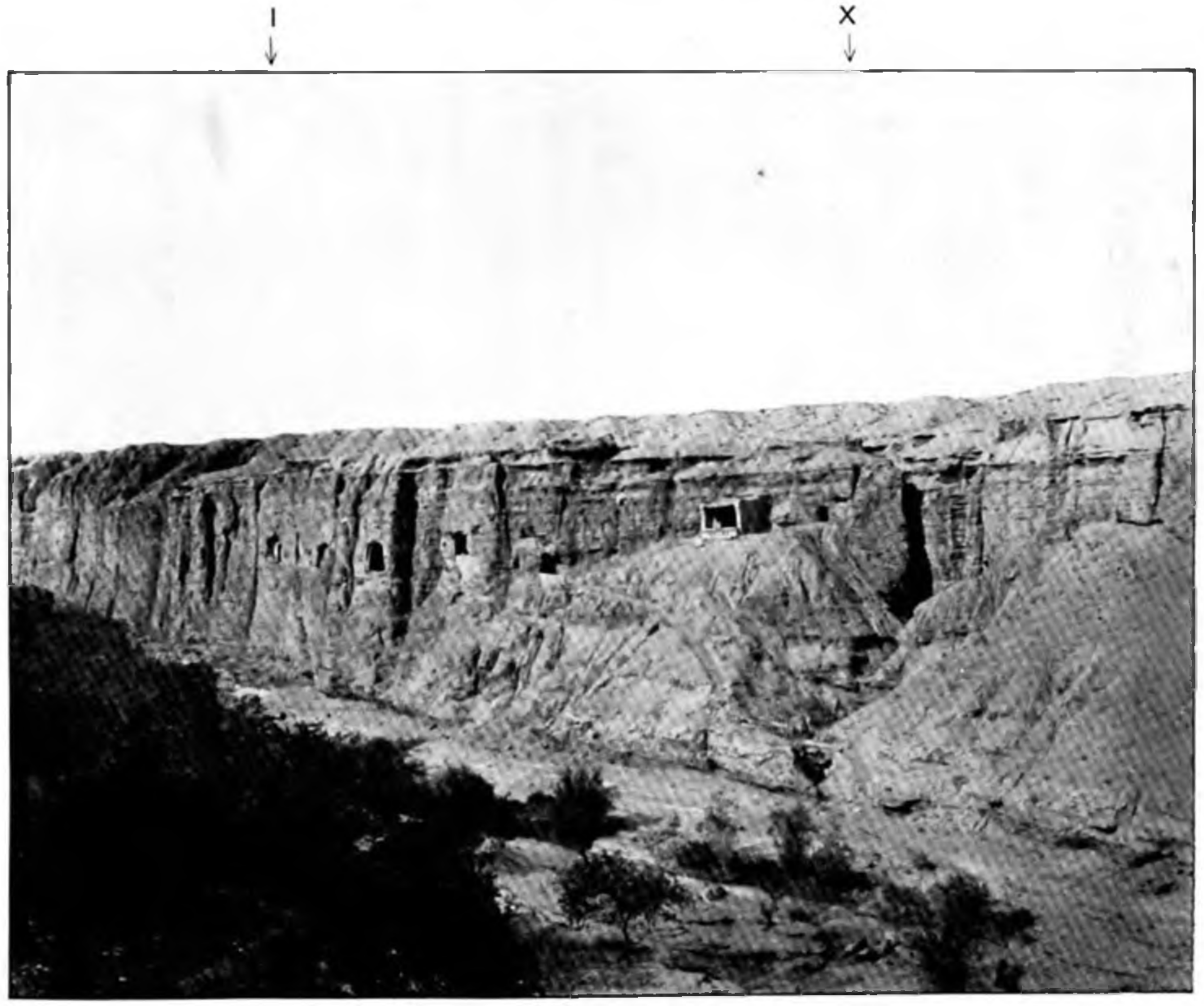


239. WIND-ERODED EAST WALL, NEAR NORTH-EAST CORNER, OF DESERTED TOWN SOUTH OF AN-HSI.

240. PORTION OF INNER EAST WALL OF RUINED TOWN OF SO-YANG CHÊNG, BREACHED BY WIND EROSION, SEEN FROM EAST.



241. GROTTOES OF HSIAO-CH'IEN FO-TUNG, ABOVE TA-SHIH, SEEN FROM NORTH-WEST.



242. CAVE TEMPLES ON LEFT RIVER BANK, WAN-FO-HSIA, SEEN FROM NORTH.

mostly covered by débris, rises a second base which presents a circular appearance with numerous shallow projections. It is possible that the plan which served as the original model for this base was the elaborate cruciform one of the Rawak Stūpa, as reproduced in the miniature votive Stūpas to be presently mentioned, but here applied without the stairs at the ends of the cross and with the projections of the numerous angles reduced. Above this base, over 15 feet high, follows a third apparently circular base, from which rises, over a kind of cushion moulding or plinth, the cylindrical, almost flat-topped dome. A very striking feature is the elaborate and disproportionately large member above, bearing a succession of big *chattras* in brickwork. The total height of the Stūpa appears to be over 40 feet, while the diameter of the main base may be estimated at about 27 feet. The impression I received of the whole Stūpa was that it belonged to later Sung times, perhaps to the period (eleventh–thirteenth centuries) when westernmost Kan-su was subject to Tangut or Hsi-hsia rule. But without fixed chronological data, either here or in the case of certain Stūpas at Turfān and the Shikchin 'Ming-oi' of Kara-shahr which have features partially resembling, any attempt at dating must be distinctly hazardous.

Cuttings by treasure-seekers.

There was no trace left of the deposit, if any, which the interior of the Stūpa may once have contained, and the hope of which, no doubt, had excited the treasure-seekers' efforts marked by the various big cuttings and tunnels. Their burrowings had not spared the row of small Stūpas, about 10–12 feet in diameter, and half a dozen in number, which line the northern edge of the terrace. Some had completely collapsed in consequence. Those still upright showed a small interior chamber, nowhere more than two feet square, and in the case of two Stūpas this was found to have been filled with hundreds of miniature clay Stūpas after the fashion of those I had discovered deposited at the Khādalik shrine Kha. vii.[11] Most of these little votive offerings had been thrown outside and more or less injured by effacement or weathering. But there remained enough specimens fairly intact to show that they had all been reproduced from a few moulds. The most interesting of the specimens is So. a. 006 (Plate CXXXIX). It precisely reproduces the ground-plan of the Rawak Stūpa, with the four cruciform arms of the main base carrying stairs,[12] but gives details of the superstructure which no longer survive there. The essential features are preserved also in So. a. 009 (Plate CXXXIX), 0010, made from less carefully executed moulds, while So. a. 007, 008 (*ibid.*) are conventionalized representations corresponding in general type to the Khādalik models.

Deposit of miniature clay Stūpas.

Fragments of glazed pottery and appliqué reliefs.

The terrace portion to the south of the main Stūpa appears to have been once occupied by a temple. But the remains of this had been completely destroyed to the very foundations, perhaps for the sake of utilizing the building materials elsewhere. The existence of a shrine was, however, attested by numerous fragments of hard green-glazed pottery which evidently belonged to the tiled roof. The specimens So. a. 001–2 (Plate IV) are moulded in relief with parts of winged dragon figures. In So. a. 003, 005 (Plate IV) we have fragments of glazed appliqué reliefs in stucco which probably decorated the temple walls. To the same may have belonged also the arm of a small moulded stoneware figure similarly glazed, So. a. 004. I may note here that green-glazed pottery of similar type used for the decoration of the tiled roof and walls was found by me in plenty at a ruined shrine of Kara-khoto, belonging probably to the Hsi-hsia period, which I excavated in 1914. Some quarters adjoining the temple on the south-east, of which the walls were just traceable, were cleared without any finds.

The account of other structural remains which I noticed at the site may be brief; for they were too scanty or indistinct to permit of a determination of their age. When returning northward from

[11] See above, pp. 161, 194.

[12] Cf. *Ancient Khotan*, i. pp. 485 sq.; ii. Pl. XL; for a similar ground-plan at Farhād-Bēg-yailaki, see below, chap. XXXI. sec. i, with Pl. 58, and another at Sahri-bahlōl, Stein, *Indian Archaeol. Survey, Annual Report*, 1911–12, p. 118, with Pls. XXXV, L.

Débris-covered areas.

the large mound near ε, the point to which the line of the ancient canal could be followed,[13] I crossed an extensive 'Tati' area, as shown on the map, for a distance of about three miles from south to north. All the way potsherds of dark grey and red clay strewed the ground in plenty. Their look for the most part was older than that of the badly decayed clay walls of houses which were met with at points marked on the map. Is it possible that most of the abundant pottery débris dates back to an earlier occupation of the ground than that which the remains of the dwellings indicate? The physical conditions on 'Tati' ground would fully admit of this.

Chronological evidence of coin finds.

As regards the ruined town and its immediate vicinity, I have stated above that such chronological evidence as is obtainable from the prevailing ceramic remains picked up there points clearly to occupation during T'ang and Sung times. It only remains to add that the evidence of the coins, which necessarily is more definite, fully agrees with this, but at the same time leaves the possibility open of occupation having started somewhat earlier. As reference to the list in Appendix *B* will show, the total of 38 identifiable copper coins or fragments of such is made up of 25 pieces showing the legend *K'ai-yüan*, first used under Kao Tsu, A.D. 618–27, but reproduced on coins through most of the T'ang period; 1 of *Ch'ien-yüan*, A.D. 758–60; 2 of Sung times; with the addition of 10 *Wu-chu* pieces, of which one may be attributed to the Sui dynasty (A.D. 581–618), while the rest are evidently earlier.

OBJECTS FOUND AT OR NEAR SO-YANG-CH'ÊNG

So. 009. Upper R. arm of wooden statue, life-size, with elbow. Latter apparently bare. Arm has two garments, the under showing four rows of gathered frills. Over it hangs point of cloak decorated with pattern of four-petalled flowers and lozenges in relief, and bordered by line of dots between plain bands, from outer of which hang beads. Arm was bent at elbow; just below cut off and pierced to take tenon from fore-arm. 11½″ × 2½″. Pl. XLVII.

So. 0014. Iron arrow-head, lozenge-shaped in section, with small square shoulder from which projects tang. Length of head 1¾″, length of whole 2⅝″.

So. 0015. Iron arrow-head, as So. 0014, but without tang; much corroded. Length 1⅞″.

So. 0016. Fr. of iron opium pipe (?). Short curved piece of tubing, broken and split at one end; near the other widened into bowl double the width of stem and finished off. (See specimens in Brit. Mus. ethnographical galleries.) Length 1¾″, diam. inside 3/16″ to ½″.

So. 0017. Bronze rivet with hollow hemispherical head. Diam. ½″.

So. 0018. Bronze flower rosette, broken off stalk. Diam. ⅝″.

So. 0019. Fr. of bronze mirror; on back relief design of running stag within diamond-shaped field; much corroded and obscure. 1¼″ × ½″.

So. 0020. Glass bead, blue, opaque, shaped as mulberry. Diam. 5/16″.

So. 0022. Fr. of stoneware from neck of vessel; pale buff body with translucent purplish-brown glaze of varying thickness, marked with wheel lines. Chinese; prob. T'ang dynasty, or earlier. Gr. M. 3¼″.

So. 0023. Fr. of stoneware jar; pale buff body with creamy white glaze outside tinged with a bluish stain in places and painted in black with sketchy floral designs. Chinese; prob. Chin-chou or Tz'ŭ-chou ware; Sung dynasty. Gr. M. 3¼″. Pl. IV.

So. 0024. Fr. of shell. Gr. M. 2½″.

So. 0025. Fr. of stoneware from vase or bowl; grey porcelainous body with thick faintly crackled glaze of pale lavender-grey tint, with a small patch of reddish brown. Chinese; Chin-chou ware; Sung dynasty. Gr. M. 2½″.

So. 0026. Fr. of stoneware; thick light buff body, with creamy white glaze (faintly crackled) on the exterior, and rough floral (?) pattern painted in brown; on the interior, dark brown glaze. Chinese; prob. Tz'ŭ-chou ware; Sung dynasty. Cf. So. 0043. Gr. M. 2⅝″.

So. 0027. Fr. of stoneware; thin dark grey body with brown exterior and inside coated with opaque creamy white, over which is a sort of marbled design in pale green crackled glaze. Chinese. Gr. M. 2″.

So. 0028. Fr. of porcelain from base-rim and side of bowl; thick white body with floral design painted in blue under greenish-white glaze. Chinese; Ming dynasty. Gr. M. 2¼″.

So. 0029. Fr. of porcelain from rim and side of bowl; greyish-white body with wash of white slip inside and on rim, and a transparent glaze of faint creamy tinge. Chinese; prob. Sung dynasty. Gr. M. 2¾″.

So. 0030. Fr. of porcelain from bowl; thick white body painted in blue under greyish-white glaze; inside,

[13] See above, p. 1101.

wing of bird, outside formal design in compartments. Chinese; Ming dynasty. Gr. M. $1\frac{3}{4}''$. Pl. IV.

So. 0031. Fr. of stoneware; buff, with brown-black glaze inside and on part of exterior. Chinese; resembling a vase in British Museum supposed to have been found in a T'ang dynasty tomb. Gr. M. $2\frac{1}{2}''$.

So. 0032. Fr. of porcelain from rim and side of bowl; creamy white body with glaze of faint greenish-cream colour covering interior and rim outside. Chinese. Gr. M. $1\frac{3}{4}''$.

So. 0033. Fr. of stoneware; buff body with black glaze inside; brown glaze outside scraped away so as to expose buff body and leave a pattern in brown. Spiral frond? Chinese; prob. Sung dynasty. Similar ware found in Shantung and prob. made at Po-shan factories. Gr. M. $2\frac{3}{4}''$. Pl. IV.

So. 0034. Fr. of porcelain from rim of bowl; white body with greyish-white glaze and marbled blue border. Chinese; seventeenth century. Cf. So. 0044. Gr. M. $1\frac{3}{4}''$.

So. 0035. Fr. of pottery; hand-made, of well-levigated grey-burning clay, fired on open hearth; 'mat-marking' on exterior. Gr. M. $1\frac{1}{2}''$.

So. 0036. Fr. of porcelain from bowl; white, with moulded petal design on exterior; thin translucent pale green glaze. Chinese; Yüan or Ming dynasty. Gr. M. $1\frac{3}{4}''$.

So. 0037. Fr. of stoneware from bowl; dark grey body with olive-green celadon glaze; moulded orn. on interior, indistinct. Chinese; prob. Sung dynasty. Gr. M. $1\frac{1}{2}''$.

So. 0038. Fr. of stoneware from side and base of bowl. Grey body with olive-green celadon glaze; moulded design inside of large flower and foliage (? sunflower); base unglazed; grit adhering to inner face of foot-rim. Chinese; prob. Sung dynasty. Gr. M. $3''$. Pl. IV.

So. 0039. Fr. of stoneware from bowl. Grey body with olive-green celadon glaze; intricate moulded design of foliage inside. Chinese; prob. Sung dynasty. Gr. M. $2\frac{1}{2}''$.

So. 0040. Fr. of coarse porcelain bowl; white, painted in underglaze blue; inside Chinese (?) chars.; stripes outside and part of a rough seal-mark. Chinese. Coarse make which might be a modern export porcelain. Gr. M. $3\frac{1}{2}''$.

So. 0041. Mouth of pottery amphora; coarse reddish-buff clay, covered with irregular deep brown glaze. The mouth, cup-shaped, with double moulded rim and long funnel below, was inserted in neck of finished pot after glazing, just previous to firing. Pot glazed inside and out. Chinese. H. $2\frac{3}{4}''$, diam. $2\frac{3}{4}''$.

So. 0042. Fr. of pottery; hand-made, of light grey-burning clay, lightly but very evenly fired. Loop handle on outside. Vessel was moulded over a core which has left on inner face impression of coarse string canvas; but as impression is *in recto*, not a negative, there must have been some elaboration in the process. Gr. M. $2\frac{3}{4}''$.

So. 0043. Fr. of stoneware; hand-made, grey, moulded outside a basket the coarse woven texture of which is impressed on inner surface. Inside covered with brown glaze; outside covered with thin white glaze, whereon are traces of floral orn. in brown. Chinese; prob. Tz'ŭ-chou ware; Sung dynasty. Cf. So. 0026. Gr. M. $3\frac{1}{4}''$.

So. 0044. Fr. of thin porcelain from rim and side of bowl; white, painted in underglaze blue with dragon outside, and blue border with white plum-blossoms inside. Chinese; seventeenth century. Cf. So. 0034. Gr. M. $3\frac{1}{4}''$. Pl. IV.

So. 0045. Fr. of porcelain from rim of bowl; coarse greyish body with underglaze blue band, and iron-red orn. Chinese; seventeenth century. Cf. So. 0034 and 0044. Gr. M. $\frac{7}{8}''$.

So. 0046. Fr. of pottery; hand-made, of fairly well-levigated clay burnt to brick-red on outer face; fired on open hearth; 'mat-marking' on exterior. Gr. M. $2\frac{1}{4}''$.

So. 0047. Fr. of pottery from wall of large vessel; hand-made, of grey-burning clay, fairly well-levigated, kiln-fired. On outside, orn. in high relief: foot and claws of dragon, and trefoil (?) leaf. $4\frac{3}{4}'' \times 3\frac{1}{4}''$. Pl. IV.

So. 0048. Fr. of stoneware; buff body with even dark brown glaze; slightly ribbed. Chinese. Gr. M. $1\frac{3}{4}''$.

So. 0049. Fr. of stoneware from bowl; hard well-levigated drab clay with thick turquoise glaze on inside; on outside similar glaze bleached and destroyed by weathering. 'Near-Eastern' type of glaze; but probably of local fabric. Gr. M. $1\frac{1}{4}''$.

So. 0050. Fr. of pottery; hand-made, of well-levigated clay burning to terra-cotta red, hearth-fired; with appliqué relief of beast's head having wide mouth and puck ears. Inner surface dotted with small circular studs outstanding in low relief. Vessel presumably moulded over a core; but it is impossible to explain the particular feature. $1''$ sq.

So. 0051. Fr. of porcelain from side and rim of bowl; greyish-white body with rough floral design painted in dull underglaze blue; six rivet holes. Chinese; prob. late Ming or seventeenth century. Cf. T. XI. 0010, 0012. Gr. M. $1\frac{3}{4}''$. Pl. IV.

So. 0052. Part of terra-cotta relief plaque, from oblong mould showing Buddha seated in meditation between two Caityas (?). Broken across head, fired unevenly prob. by accident. Mould similar to Wang. 001–7. $1\frac{3}{8}'' \times 1\frac{1}{4}''$.

So. 0053. Fr. of shell. $1\frac{1}{4}'' \times \frac{3}{8}''$.

So. 0054. Translucent green glass, lump of. Gr. M. $1''$.

So. 0055. Yellow ochre, lump of. Gr. M. $\frac{15}{16}''$.

LIST OF ANTIQUES FOUND AT RUINED STŪPAS AND SHRINE EAST OF SO-YANG-CH'ENG

So. a. 001–2. Two frs. of glazed tiles from roof of temple; soft ill-levigated drab clay covered with rough dull green glaze; moulded in relief, part of fig. of dragon (?) having cloud-like wings. Type of technique resembles the Romano-Egyptian glazes and those of Persia in the second–ninth cents. A.D. Gr. M. 2½". Pl. IV.

So. a. 003. Fr. of glazed tile (?) in red clay with bright green glaze; represents flame common on vesica borders, beyond which is curved edge; the glaze carried back on this behind to a point of attachment; on back, reed markings. Fr. has been moulded separately, and attached to larger background before glazing and firing. 1½" × 1¼". Pl. IV.

So. a. 004. Arm of small moulded stoneware fig. (of Buddha?); white clay, with translucent light green glaze. Length 1¾".

So. a. 005. Fr. of glazed appliqué stucco relief (from wall of shrine?); reddish-buff clay with translucent light green glaze. Moulded with three oblong bosses within a lobed field formed by a raised line with radiate border beyond; this on roughly oval medallion affixed to flat background before glazing. (Perhaps summary representation of seated Buddha in vesica?) 1½" × 1½". Pl. IV.

So. a. 006. Clay model of Stūpa; used for votive offering. The ground-plan almost precisely that of Rawak Stūpa (see *Ancient Khotan*, Pl. XL), though elevation considerably higher in proportion. Model stands on circular base round which runs inscr. in relief in Brāhmī (?) chars. much effaced. On this rises Stūpa base proper—its ground-plan that of a cross superimposed on a square, the only difference from Rawak Stūpa being that the projections in recessed angles appear doubled, as the four flights of steps do not occupy whole width of ends of cross, but are slightly narrower and advanced; there are thus twenty-eight projecting angles to the ground-plan. Above this complex base a square member, its sides broken by the upward continuation of the steps; above this the dome, passing from an octagonal to a circular form; on top a sq. member, meant to carry *chattras*; cf. above, p. 1105.

So. a. 009, 0010, though roughly executed, preserve the essential features of the Stūpa; So. a. 007, 008 have lost all constructional qualities, and rank with Kha. ii. c. 001; vii. 0010. H. 3", diam. at base 3". Pl. CXXXIX.

So. a. 007. Clay model of Stūpa. Circular throughout; inscr. round base; above this, three rings of regularly impressed tooth pattern, distinguishing members of building Cf. So. a. 006. H. 2¾", diam. at base 3".

So. a. 008. Clay model of Stūpa, resembling So. a. 007. Inscr. round base; round circular cone four rings, overlapping, of regularly impressed tooth orn. H. 3", diam. at base 2⅞". Pl. CXXXIX.

So. a. 009. Clay model of Stūpa. Inscr. round circular base. Ground-plan as in So. a. 006 (q.v.), but work throughout careless and without regard to structural values. Dome misshapen. H. 2⅛", diam. at base 2". Pl. CXXXIX.

So. a. 0010. Clay model of Stūpa. Inscr. round base. Above, as So. a. 009, but much worn; one side broken away and dome broken. Cf. also So. a. 006. H. 2¼", diam. at base 2⅛".

Section IV.—THE GROTTOES OF THE MYRIAD BUDDHAS

March to T'a-shih.

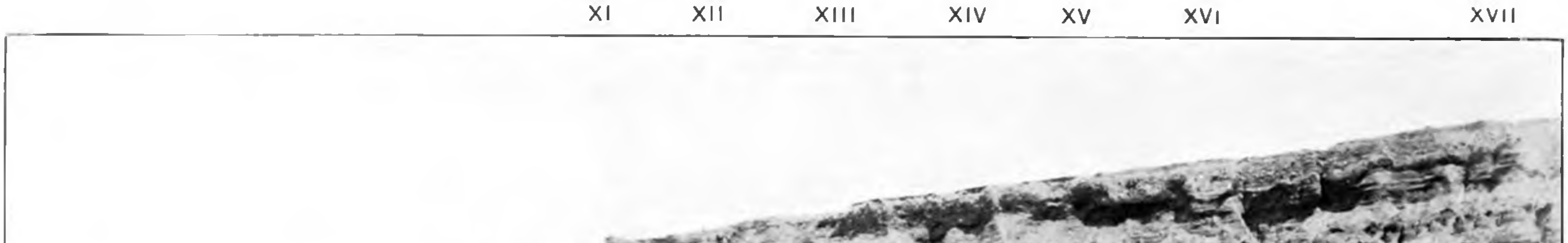
After my short stay at Ch'iao-tzŭ I resumed on June 29 the journey into the mountains on the south. The first march, all the way through a wide grassy plain with magnificent but wholly unused grazing, took me to T'a-shih. This oasis, of about the same size as Ch'iao-tzŭ but with its homesteads more scattered, receives its irrigation water partly from the river coming from the snowy range south and partly from springs rising at the foot of the outer hill range on the south-east. It is obviously the drainage feeding these springs which at an earlier period rendered possible the occupation of ground about 5 miles to the south-east, as marked on Map No. 83. A. 4. The Surveyor, who was able to visit the site on his way, reported as the only remains there some mounds, apparently from completely decayed structures of clay, rising over the gravel glacis.

Cave shrines of Hsiao Ch'ien-fo-tung.

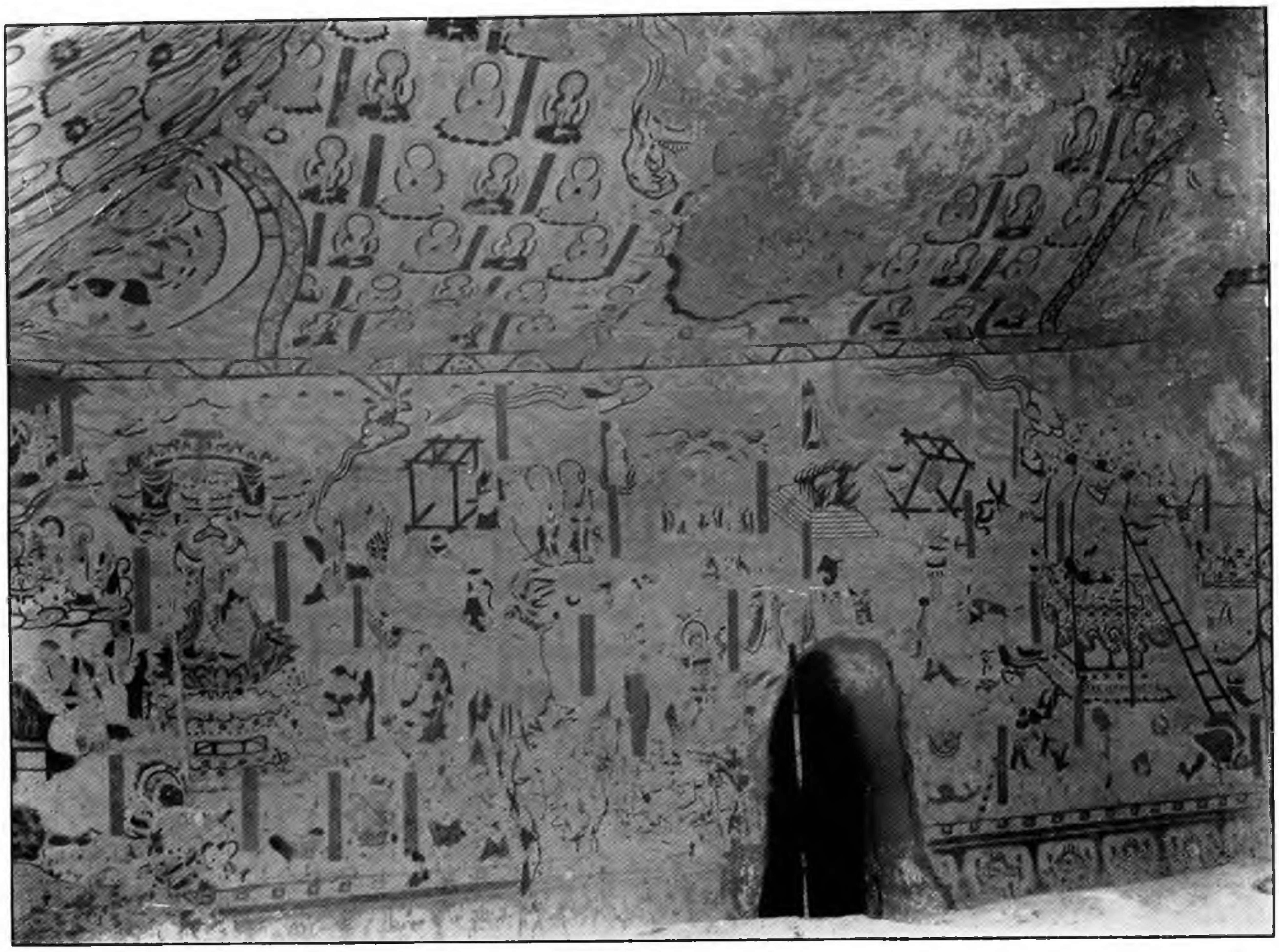
At T'a-shih we struck the main route already mentioned, which connects An-hsi and the great road coming from northern Turkestān and Mongolia with Tibet across the high plateaus of Tsaidam. Ascending the left bank of the T'a-shih river it brought us next day, after more than ten miles, to a group of about ten small cave-shrines carved from the conglomerate cliff on the opposite side of the deep-cut river-bed (Fig. 241).[1] The name of *Hsiao Ch'ien-fo-tung*, or 'Little Ch'ien-fo-tung', by

[1] In Map No. 81. D. 4 the position of Hsiao Ch'ien-fo-tung has been shown by error about two miles too far up the river. The latter debouches from the outer hill range about a mile above the cave-shrines.

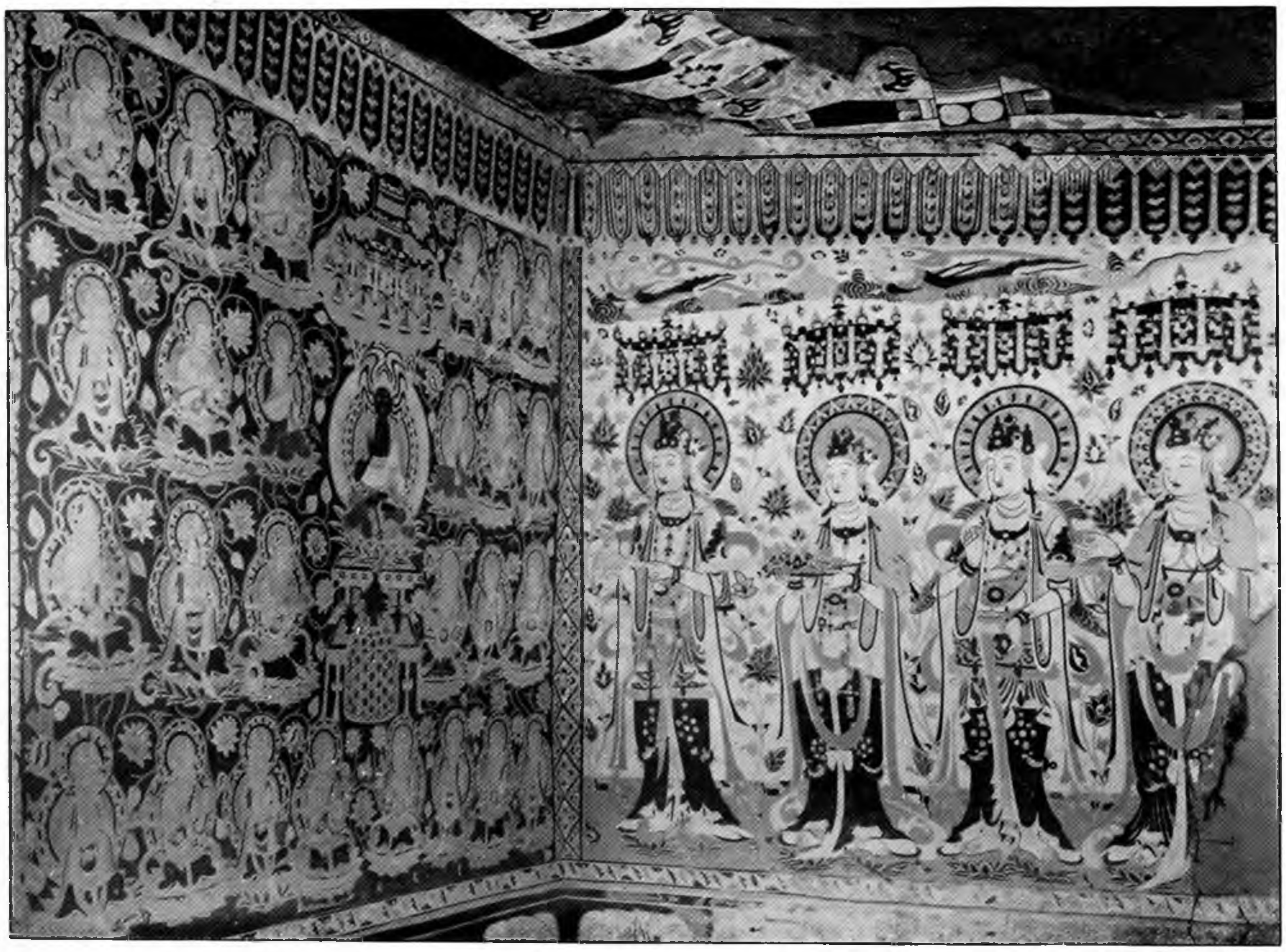
243. CAÑON WITH CAVE TEMPLES OF WAN-FO-HSIA, SEEN FROM NORTH-WEST.



244. CAVE TEMPLES ON RIGHT BANK OF RIVER, WAN-FO-HSIA, SEEN FROM SOUTH-WEST.



245. TEMPERA PAINTINGS SHOWING LEGENDARY SCENES, ON SOUTH-EAST WALL OF CELLA IN CAVE II, WAN-FO-HSIA.



246. TEMPERA PAINTINGS ON NORTH-WEST AND NORTH-EAST WALLS, ANTECHAPEL OF CAVE XVIII, WAN-FO-HSIA.

which they are known, is appropriate enough ; for the mural paintings which decorate these grottoes, though badly effaced in many places, very closely resemble, in subject and style, those found in the smaller of the 'Thousand Buddhas' Caves' and approximately dating from the end of the T'ang period and the century following. None of the grottoes measured over 16 feet square, most of them only 10–12 feet, and all showed restoration by their modern stucco images, etc.

'Chiusa' in T'a-shih river gorge.

No detailed examination being called for here, the march was continued up the picturesque winding gorge in which the river above Hsiao Ch'ien-fo-tung passes the outer hill range. At a point some fifteen miles above T'a-shih, where the route leads through a particularly narrow defile between serrated bare cliffs, a massive stone-built wall of old appearance closes the bottom of the gorge and ascends for some 250 yards the steep slope to the east which commands it. It is a regular 'chiusa', meant to bar this important route by which danger of inroads from the south has always threatened, as was proved as late as 1894 or so by the advance of Tungan rebels upon T'a-shih.[2] Together with similar defensive works seen at and above Shih-pao-ch'êng and elsewhere in these mountains, it suggested to me at the time that the Chinese settlements on the ancient line of communication from Su-chou to Tun-huang must have been exposed to attacks from the side of the plateaus and high valleys of Tsaidam quite as much, perhaps, as to barbarian raids across the desert north and west.

Approach to *Wan-fo-hsia* site.

Above this defile the valley becomes somewhat wider, though still bare. After about two miles the route ascending it reaches a little basin on the right bank of the river, filled with luxuriant shrubs and trees and known as Mo-ku-t'ai-tzŭ. Beyond this the course of the river lies in a deep-cut and in parts quite inaccessible cañon, while on either side of it there extends, with gentle but steady rise, a vast and utterly barren gravel slope towards the third outer mountain range in the south. It appears to me very probable that the existence of so fertile a spot as Mo-ku-t'ai-tzŭ, providing plenty of grazing and fuel in what otherwise is a great submontane desert of barren hills and Piedmont gravel, accounts mainly, if not wholly, for the establishment in its vicinity of the important pilgrimage place represented by the grottoes of *Wan-fo-hsia* 萬佛硤, the 'Valley of the Myriad Buddhas'. An ascent of about four miles further on the right bank over a steadily rising gravel 'Sai' brought us to that point above the river gorge, now turned into a regular cañon, from which the sacred site can be approached with least difficulty. The information collected at Tun-huang had made me aware that, notwithstanding its grandiloquent name, this collection of cave-temples could not compare in extent and importance with that of the 'Thousand Buddhas'. Yet what the site lacks in size seemed to be made up by the singular wildness of its setting, which rendered the first impression most striking.

Situation of *Wan-fo-hsia* grottoes.

Along both sides of the deep rift, here only about 200 yards wide at the bottom and much narrower still higher up, which the river coming from the snowy range above Shih-pao-ch'êng has cut through the hard conglomerate, the cliffs, nearly vertical for most of their height, show the openings of temple grottoes extending for a distance of over a quarter of a mile.[3] The effect of the frowning rock walls over a hundred feet high and of the dark cavities piercing them is heightened by the contrast which the narrow green strip of orchard and cultivation raised along a tiny canal presents at the bottom. Steep slopes of weathered conglomerate strata continue the rock faces to the bare plateau above. Desolate as the scene is, it receives animation from the sound and rapid movement of the river tossing in its boulder-filled bed. It issues at the south-eastern end of the site from beneath confused masses of fallen rock which stop further ascent in the chasm. The condition of the sacred site, as I found it at the time of my visit, harmonized very pleasantly with the picturesque seclusion and peace of this submontane Thebais. Whatever damage the interior of the cave-temples had suffered during earlier times, the numerous small shrines and Stūpas scattered along a raised

[2] Cf. *Desert Cathay*, ii. p. 256.

[3] See Figs. 242–4.

terrace at the foot of the cliffs on the right bank (Fig. 244) seemed kept in fair repair. This and the cheerful appearance of the three well-fed Taoist priests holding charge gave to the place the air of a religious establishment quite 'in being'. The visits of well-to-do Mongols from the high valleys and plateaus to the south are probably of considerable help in the matter of pious support. The three Tao-shihs, who claimed to have been in residence for over thirty years, appeared to know little or nothing about the history of the place they were guarding. But from various indications I concluded that, owing to its position far away from ground affording supplies and plunder, it had escaped most of the havoc suffered by Chinese shrines on the main track of the great devastating Tungan inroads.

Caves of lower story on R. bank.

The grottoes of Wan-fo-hsia, though executed on a distinctly smaller scale, in all essential points of architectural disposition and artistic decoration show the closest resemblance to that average type of Ch'ien-fo-tung shrines which has been described above, and which may approximately be assigned to the ninth–tenth century. This will explain why in spite of the pleasant stay offered by Wan-fo-hsia I did not feel justified in extending my visit beyond two days, and also why my description of its remains must be brief. The principal caves are found on the right bank ranged in two stories, as seen in Fig. 244. The lower one opens on a terrace, about 20 feet above the river; the other extends on a level about 50–60 feet higher. The series of five main caves below starts on the south-east with one containing a colossal seated Buddha image, which rises up into the second story and is there approached by the shrine I numbered XVII.[4] Next to it is a cave with a colossal figure of Buddha recumbent in Nirvāṇa, fully 30 feet long. Both these, like all the other stucco images in the caves of Wan-fo-hsia, are abundantly restored and in consequence bear a modern appearance. The five caves of the lower story are rendered very dark by the verandahs built in front of them. Added to the effect of incense smoke this makes the examination of the wall-paintings, executed here as elsewhere in tempera, difficult. The subjects of the larger panels appear to be chiefly assemblies of Buddhas and Bodhisattvas, set within a square frame of geometric design, and this again enclosed within a circle or oval of elaborate floral pattern. In some of these panels, I thought, the style suggested Tibetan influence. These lower main caves, together with five or six small grottoes between them containing new frescoes, are the shrines which seem to receive now most attention from resident priests and pious visitors.

Upper row of cave-temples on right bank.

The upper row of caves is approached by flights of stairs roughly cut into the rock, which start near some small grottoes serving as quarters for the priests and visible on the extreme left of Fig. 244. After crossing a deep cleft of the rock wall by a rickety bridge and ascending a roughly hewn tunnel past a cave of which the front part has fallen, we reach the northernmost of a line of cave-temples, XI–XXIII, extending on a uniform level. All of them comprise a cella, square or nearly so, with sides varying from 20 to 32 feet; an antechapel, itself as broad as the cella, but only of moderate depth and separated from the cella by a shallow wide passage; a high porch or outer passage, in some cases 20–30 feet deep where it is intact, admitting light and air from the face of the cliff, and visible with its opening in Fig. 244. The shrines originally communicated with each other by means of narrow plastered passages leading from one porch to the other through the facing part of the rock wall. But where this had crumbled away or become unsafe, a rough

[4] The temple court built outside the cave of the colossal Buddha is seen on the extreme right in Fig. 244, and above it also the balcony and porch in front of XVII.

I much regret that want of time did not allow me to make a plan of the site. My references to the caves needing special mention are based on a numeration which starts with the uppermost of the shrines on the left bank (I; see Fig. 242). After descending this bank to shrine X, it is continued with the lowermost of the grottoes in the upper story on the right bank (XI, in Fig. 244) and closes with shrine XXII at the south-eastern end of this story.

tunnel connecting the antechapels had been driven through the rock, obviously at a later date as proved by the broken wall-paintings.[5] The uniformity with which this disposition is repeated in all shrines points to execution upon a definite plan and at no great distance of time, and with this the uniform style of their decoration seems in full accord.[6]

Subjects of mural paintings.

Throughout these cave-temples the walls bear paintings in tempera closely resembling in style those of Ch'ien-fo-tung. The walls of the porches ordinarily display on the one side rows of men dressed in dark-red robes with wide-brimmed black hats, and on the other processions of ladies wearing rich wide-sleeved dresses and that elaborate coiffure with flowers, bands, and pendants around bulb-shaped caps which the examination of the paintings brought away from Ch'ien-fo-tung has allowed us definitely to associate with the fashion prevailing in the Tun-huang region during the tenth century. There can be no doubt that these figures carrying offerings, which also recur on the side walls of the entrances to the cellas, just like the corresponding types seen on the walls of some of the Ch'ien-fo-tung shrines, are intended to represent donors and donatrices. The walls of the cellas and antechapels are decorated either with processions of large, richly robed Bodhisattvas moving under ornate canopies[7] or with a variety of panels, showing familiar scenes from Buddhist Heavens;[8] Buddhas enthroned among rows of Bodhisattvas;[9] large representations of Mañjuśrī and Samantabhadra on their traditional Vāhanas, etc.[10] A comparison of the photographs illustrating a few specimens of these decorative themes with the reproductions of corresponding mural paintings at Ch'ien-fo-tung will suffice to bear out the very close resemblance in style already referred to. The same is the case also with the representation of the curious 'wind scene' legend which I had occasion to describe above as seen on the wall of Ch. xvi at the 'Thousand Buddhas', and which is found here again with identical scheme and details on the back wall of two cellas.[11]

Style and technique of mural paintings.

The great uniformity of style and technique displayed by the frescoes in this whole series of cave-temples is striking, and suggests that all of them are more or less coeval reproductions of the same prototypes. That these were to be found among the mural paintings of Ch'ien-fo-tung I could scarcely doubt at the time, with the recollection of the latter still fresh in my mind. The execution of the paintings in this main group of Wan-fo-hsia grottoes impressed me as generally inferior to that of the 'Thousand Buddhas'. But whether this is due to distinctly later production or else to the employment of less skilful hands I was unable to determine. I noticed particularly the often careless drawing of outlines, and the coarse washes which replaced them in frequent instances suggested production by stencils. I may add here that the relative lowness of the walls—they seemed rarely to rise much above 10 feet—and a corresponding flatness of the ceiling seemed evidence also of more limited outlay and resources on the part of those who dedicated the Wan-fo-hsia shrines.

Sgraffiti in Chinese, Uigur, Tibetan.

I may now proceed to record a few notes about particular grottoes. In xii the left wall of the porch has numerous *sgraffiti* in Chinese, Uigur, and Tibetan characters, and among them also one in badly faded Arabic writing. Those in Chinese, which on account of their dates I had copied by Chiang Ssŭ-yeh, proved to belong to the *Chih-shun* and *Chih-chêng* periods (A.D. 1330–3, 1341–68)

[5] The opening of such a later tunnel, walled up again, is seen in xvii, Fig. 247.

[6] There is no evidence that these upper story shrines were ever accessible except from the northern end. Hence it might be assumed that these excavations were commenced from that side and successively extended. But it must be remembered that their level above the terrace ground below is not so great as to preclude the use of scaffolding, which would have expedited construction or at least permitted it to be carried on simultaneously at different points.

[7] See Fig. 246.

[8] For a specimen, see Fig. 247.

[9] See Fig. 246.

[10] See Fig. 247 on right.

[11] In xix and in shrine ii of the left bank (Fig. 245); cf. above, pp. 935 sq.; Figs. 233, 234, 236.

Stucco relief plaques.

of the last Mongol Emperor. The adjoining small grotto, XIII, had been completely renovated with Taoist frescoes and stuccoes. But pious regard on the part of the priests had preserved and stored away in a corner a heap of small stucco relief plaques, all from the same mould, showing a Buddha seated in *dhyāna-mudrā* between Caityas.[12] They were said to have been removed from part of a wall before it was replastered. I actually found the kind of wall-decoration thus suggested in 1914 at one of the cave-shrines of Ma-ti-ssŭ south of Kan-chou, apparently dating from Sung times. But in view of the smallness of these plaques, only about $1\frac{3}{4}$ by $1\frac{1}{2}$ inches, it seems quite possible that they served a votive purpose.

Fresco panels of cella XVI.

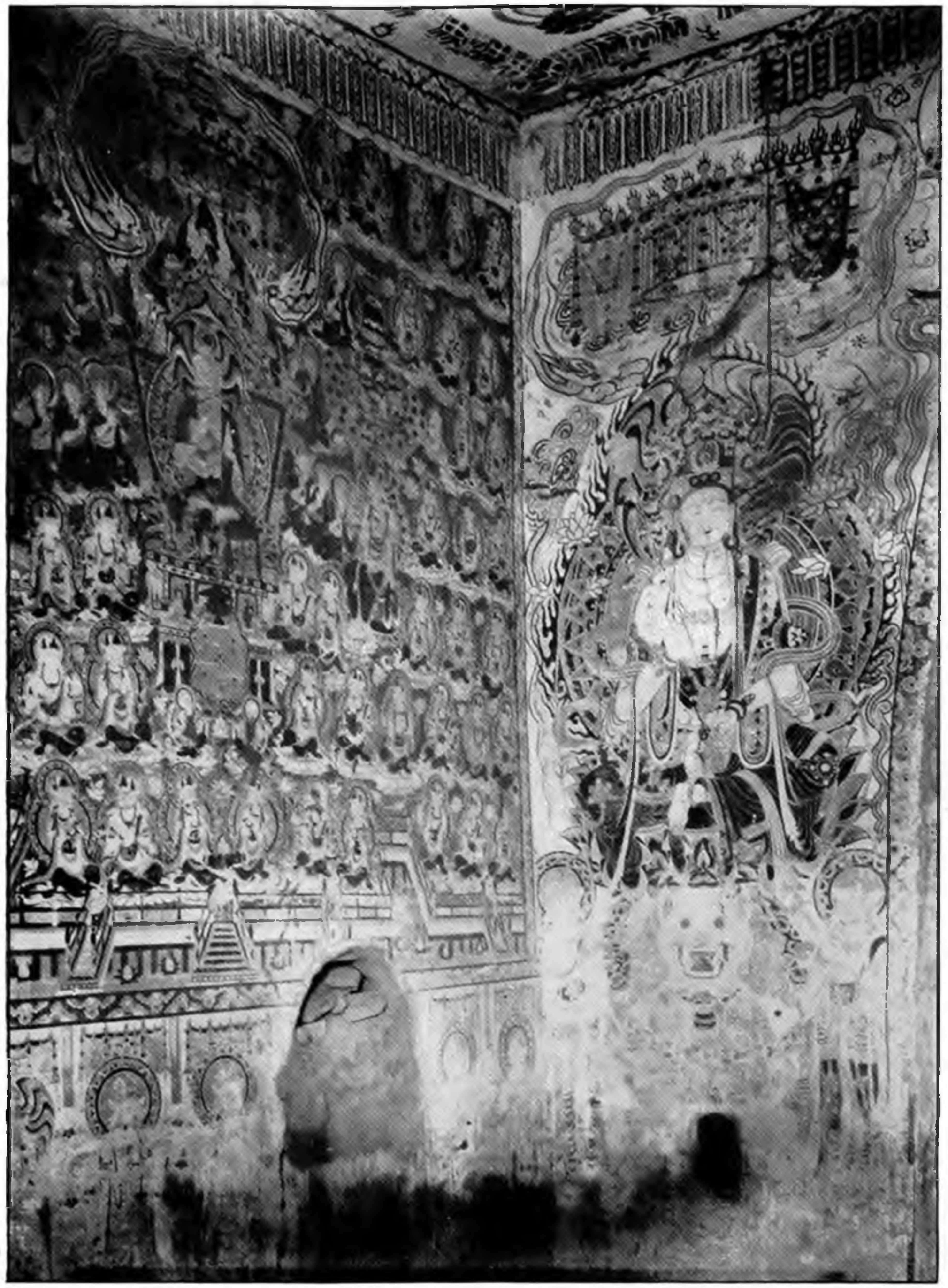
The cella of XVI contains fresco panels of superior execution, but proved to be so badly lighted that I could not photograph them. The two on each side-wall represented scenes of a Western Paradise; on the back wall, to the east, fragments of a representation of the 'wind scene' survived. Among the Chinese *sgraffiti* found with some in Uigur (or Mongolian?) and Tibetan on the left wall of the entrance to the cella none apparently bear a *nien-hao*. The shrine XVII, as already mentioned, contains in its cella the upper portion of the colossal seated Buddha image. The richly gilt head showed signs of recent renovation. Fig. 247 reproduces the wall-decoration of the left (or north-western) side of the antechapel. The large and spirited painting of Mañjuśrī on the lion attended by two Bodhisattvas has its pendant in a panel with Samantabhadra on the opposite side.

Sculptures and mural paintings of shrine XVIII.

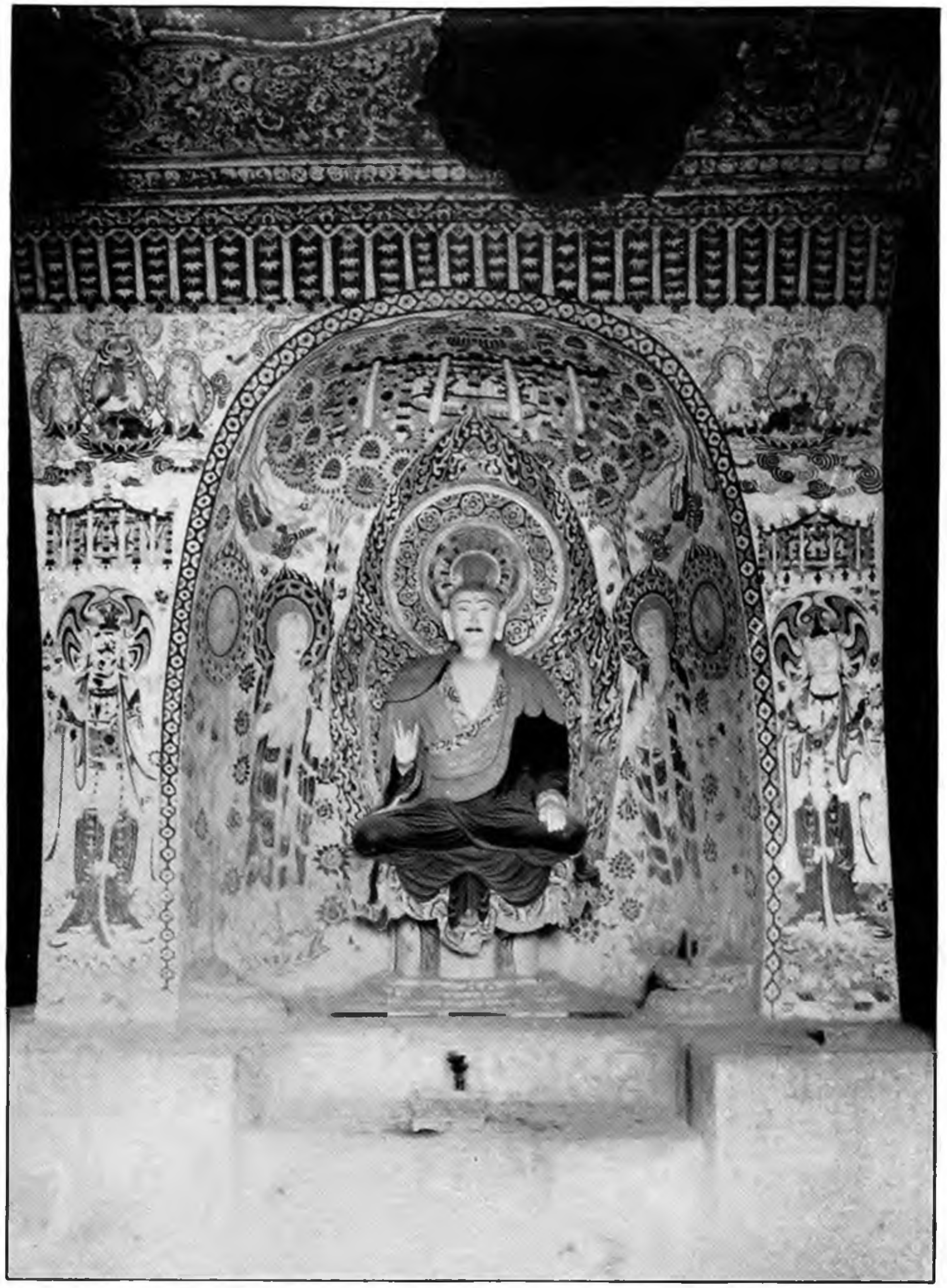
The shrine XVIII is the largest in the whole series, and on this account some details may be mentioned. The cella, 38 feet by 32, contains a central pillar spared from the rock and measuring 20 feet 4 inches by 18 feet at its base. A niche on each of its four sides holds a large seated Buddha statue, mostly restored, as seen in Fig. 248. The two Bodhisattva figures in stucco once flanking it are destroyed, but two others are painted on either side of the niche, and two disciples in monks' robes appear within it close to the large well-painted flame vesica of the Master. The decoration of the cella walls comprises eight panels, each having a Buddha enthroned between two Bodhisattvas in the centre of five rows of small haloed figures, seated. Variety is introduced by different colours of robes and background (dark purple and light green). The east wall and the corners are occupied by panels that display large figures of richly adorned Bodhisattvas with varying attributes, among them Maitreya. Similar Bodhisattva figures carrying fruit and flowers decorate the side-walls, over 7 feet long, of the passage leading from the cella into the antechapel. They appear also, life-size, in procession on the longer walls of the antechapel, as seen in Fig. 246. The narrow sides of the antechapel, which measures 29 by $10\frac{1}{2}$ feet, are decorated each with a panel showing a purple-skinned Buddha seated above an altar in the middle of four rows of seated Bodhisattvas (Fig. 246 on left). The altar in front of the Buddha (Fig. 259) is covered with a valance and table-cloth in rich colours, and bears a large covered dish between two elegantly shaped jugs. The latter, painted in terra-cotta colour like the dish, very closely resemble in their graceful design the old brass 'Aptābas' still known in the Tārīm Basin and manufactured mainly at Khotan until about the middle of the last century. The black outlines over the terra-cotta ground of the jugs and dish, which the photograph fails to bring out, seemed to me intended to reproduce a kind of open work similar to that which is a characteristic of that fine old Khotan brasswork. Finally, the walls of the porch, $20\frac{1}{2}$ feet deep and 9 feet 4 inches wide, display processions of donors of the type already described.

[12] The following describes the specimens which I brought away:

Wang. 001–7. Stucco relief plaques; seven oblong rectang. casts from same mould, showing Buddha seated in meditation between two Caityas (?). Hands covered by robe; flame-shaped halo; dark paint. Clay mixed with a little fibre; not fired. $1\frac{13}{16}'' \times 1\frac{3}{8}''$. *005* and *007* Pl. CXXXIX.



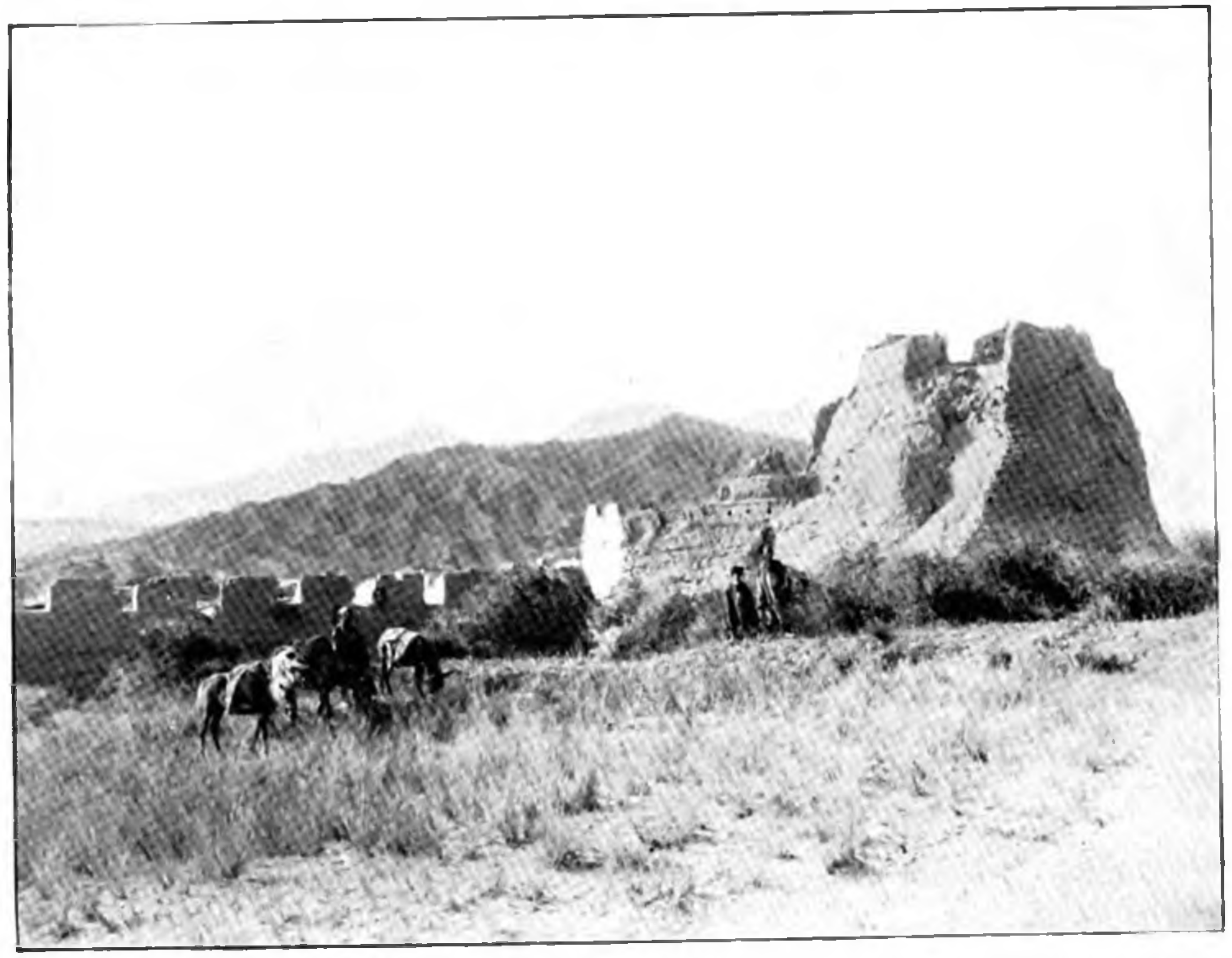
247. TEMPERA PAINTINGS ON NORTH-WEST AND NORTH-EAST WALLS OF ANTECHAPEL OF CAVE XVII, WAN-FO-HSIA.



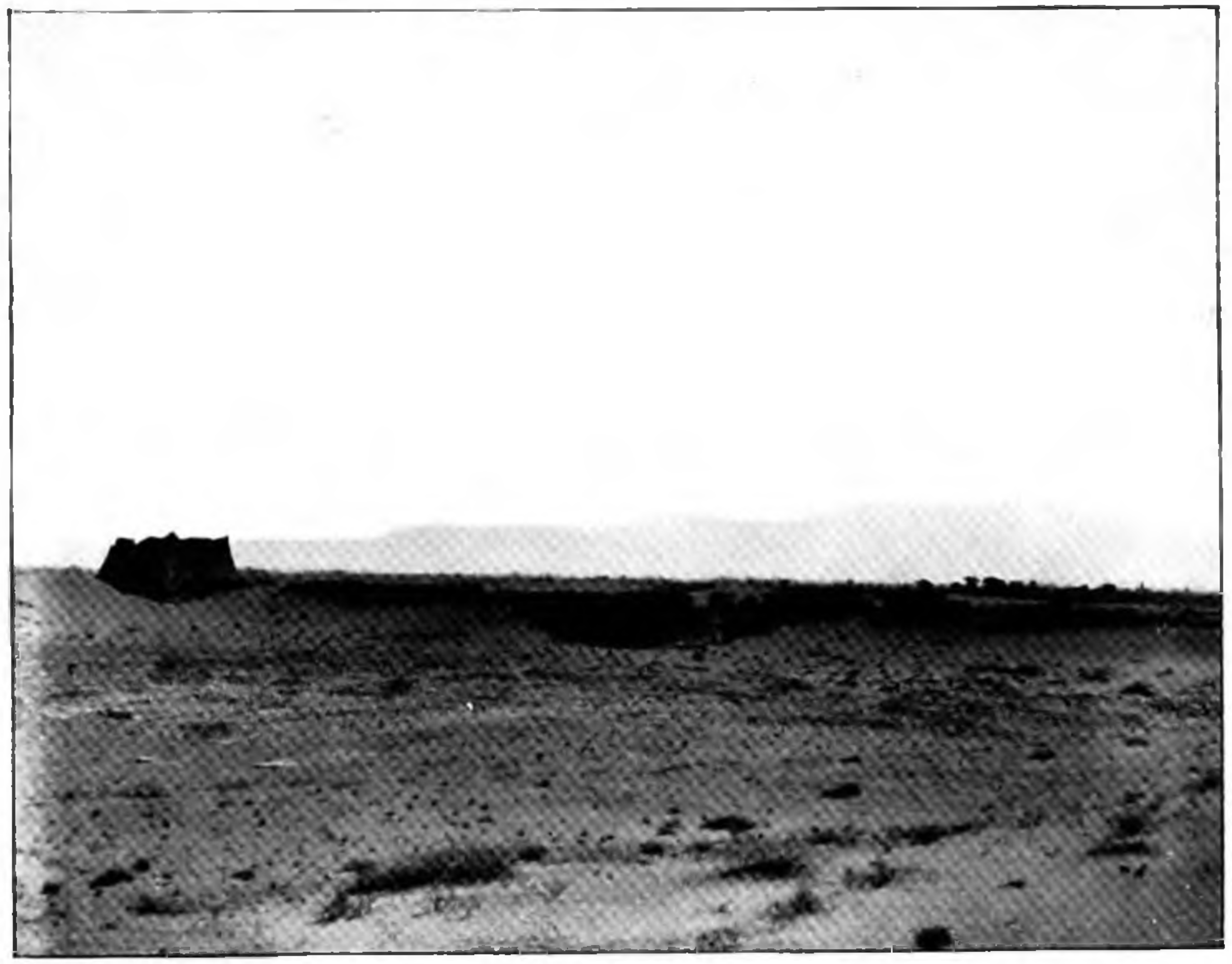
248. TEMPERA PAINTINGS AND STUCCO BUDDHA IMAGE, PARTIALLY RESTORED, FACING ENTRANCE OF CELLA IN CAVE XVIII, WAN-FO-HSIA.

249. GATE FORTRESS OF CHIA-YÜ-KUAN SEEN FROM SOUTH-WEST.

250. LINE OF MEDIAEVAL 'GREAT WALL', SOUTH OF CHIA-YÜ-KUAN, WITH VIEW TOWARDS FOOTHILLS OF NAN-SHAN.



251. WATCH-TOWER AND POST OF TA-HAN-CHUANG AT FOOT OF OUTER NAN-SHAN HILLS, SOUTH-WEST OF CHIA-YÜ-KUAN.



252. RUINED CIRCUMVALLATION AT SOUTH-WEST END OF HEI-SHUI-KUO SITE, KAN-CHOU, SEEN FROM NORTH-WEST.

Remaining shrines on right bank.

The remaining shrines of the series call for but few remarks. They are mostly small, and several very poorly lit, particularly XIX, where the side-walls of the cella are decorated with scenes from Buddhist Heavens and the back wall is occupied by a large representation of the 'wind scene'. A *sgraffito* of nine characters in Cursive Brāhmī, scribbled by the side of a donor figure on the right of the cella entrance, is of interest as affording evidence that these shrines were constructed before knowledge of the language of Buddhist Khotan had ceased. Shrines XX–XXII show in their antechapels or porches Chinese *sgraffiti* with dates which correspond to A. D. 1332, 1353, 1357, 1367. In XXIII, the last cave, Chinese *sgraffiti* are particularly numerous, all belonging to the Chih-chêng period (A. D. 1341–68), which closes the rule of the Mongol dynasty. It is of interest to note that cartouches painted over the donor figures in the porch here show what I took to be Uigur writing of the later type resembling Mongolian in ductus. There are also *sgraffiti* in the same script.

Temple grottoes on left bank.

The grottoes on the left bank, ten in all, are disposed in several groups, on levels varying from about 60 to 80 feet above the bottom of the gorge (Fig. 242). The architectural disposition is more or less the same as in the shrines of the right bank, but the porches are less deep, which may be due partly to the falling of portions of the rock face. The mural paintings are executed in a distinctly coarser fashion and, as it seemed, mainly with the use of stencils. This and the irregular arrangement of the caves may be taken as an indication of their comparatively later origin. In the first group of grottoes to the south-east, I–VI, the subjects of the frescoes were throughout of the type already noticed in the description of the caves on the right bank. Fig. 245 shows the south side-wall of shrine II with a representation of the 'wind scene', and a comparison of it with Figs. 233–4, 236, which reproduce the same theme in Ch. XVI, may illustrate the inferior character of the pictorial work here. At the same time we see here that central portion of the composition which at Ch. XVI is hidden by the screen at the back of the image platform. The cutting through the cella wall of II seen in Fig. 245 was necessitated by the falling of the rock face, which destroyed the porch and made communication with the adjoining cave through the antechapel unsafe.

Sgraffiti with dates in grottoes on left bank.

It is worth noting that, later as the decoration of the walls in this group of caves appears to be, yet a series of Chinese *sgraffiti* found in them with dates from the close of the Mongol dynasty's rule proves that the time of construction here, too, was before the second quarter of the fourteenth century.[13] After grotto VII, an isolated shrine which seemed either distinctly later or completely renovated, there follows higher up on the cliff the group VIII–X, in which the frescoes also appeared to me late, or else had been replaced by modern Taoist paintings. In X, however, by the side of some original donor figures left in the antechapel, there is found a *sgraffito* with a *nien-hao* which Chiang Ssŭ-yeh seems to have read as T'ai-ting (A. D. 1324–8).

Time limits for construction of shrines.

A few general remarks may conclude this account of the site. From Chiang Ssŭ-yeh's statements I conclude that the Chinese inscriptions painted by the side of frescoes do not furnish the date of construction for any of the shrines of the 'Myriad Buddhas'. That most of those on the right bank appear to me, from the character of their artistic decoration, approximately coeval with the tenth-century cave-temples of Ch'ien-fo-tung has already been stated.[14] The absence of inscriptions in Hsi-hsia writing is probably significant, while the presence of Uigur cartouches besides Uigur *sgraffiti*, in XXIII, can be easily reconciled with the conjectural dating just indicated. The large number of dated Chinese *sgraffiti*, left behind on the frescoed walls by pilgrims who

[13] From Chiang Ssŭ-yeh's copies of these *sgraffiti* I gather that the *nien-haos* extend from Yen-yu (A.D. 1314–21) to Chih-chêng (A.D. 1341–68).

[14] See above, p. 1111.

visited the caves during the last reigns of the Mongol dynasty, fixes the early part of the fourteenth century as the lowest possible date limit, and the *sgraffito* of XIX in Cursive Brāhmī, solitary as it is, helps to push this back somewhat further still. How long after the painting of the frescoes these mementoes of visitors had been left behind it is, of course, impossible to determine. In any case they prove that the site must have been then a well-known pilgrimage place, and this justifies the hope that some account of it may yet be found in Chinese historical records. That destructive invasions affected it less than the sacred caves near Tun-huang, which had served as a model, may be safely inferred from its out-of-the-way position in the hills and from its actual condition. But does this account also for the total disappearance of the collection of sacred Buddhist texts, etc., that the guardians of the shrines must have possessed at one time?

CHAPTER XXVII

THE NORTH-WEST FRONTIER OF KAN-SU

Section I.—TO THE GATE OF THE 'GREAT WALL'

Geographical explorations in Western Nan-shan.

With our start from the 'Myriad Buddhas' on July 3, 1907, there commenced those explorations across and along the high ranges of the Western Nan-shan which during the next two months kept my attention fixed mainly on geographical work. The results of the extensive and successful surveys then carried out over an area which, with the additions made on the return journey to An-hsi, amounted to close on 24,000 square miles, are presented in Maps Nos. 82–94. Whatever observations of a direct or indirect bearing on the geography of this great region I was able to make will be found detailed in Chapters LXXIV–LXXIX of my Personal Narrative.[1] Hence I may in the present chapter restrict myself to an account of those localities which offer an antiquarian interest, and to some remarks on those general physical features which have had a distinct bearing on the history of this region and of the tracts immediately adjoining it northward.

Head-waters of T'a-shih River.

The surveys carried out along those portions of the Nan-shan ranges which stretch to the west of the T'u-ta-fan[2] showed me that physical conditions must prevent the valleys which drain them from having ever possessed in historical times any importance beyond that attaching to the routes which descend through them from the south. The huge triangular trough at the head-waters of the T'a-shih River, though immediately adjoining the main range, is almost throughout a barren waterless waste. The only place in it which appears ever to have been occupied for any length of time is the ruined fort of Shih-pao-ch'êng.[3] It guards the defile upon which the different routes from across the high range south converge. Though its remains look recent, the position is one which is likely to have already claimed military value in earlier times.

Oasis of Ch'ang-ma and mountains to east.

Proceeding eastwards for close on fifty miles over open plateaus of stone or gravel, we find, indeed, the flourishing small oasis of Ch'ang-ma at an elevation of over 7,000 feet above the defile in which the Su-lo Ho breaks through the continuation of the Richthofen Range towards Yü-mên-hsien.[4] But the course of the river higher up lies through wholly impassable gorges, while the main range south of Ch'ang-ma, rising to peaks 19,000–20,000 feet high, affords no practicable route and descends with extremely barren slopes devoid of any but the scantiest surface drainage. Thus Ch'ang-ma can never have been a place of any consequence. Notwithstanding the favourable season, difficulties about water were also experienced on our way through the mountains east of the Su-lo Ho. In this connexion it is of interest to note that north of the Shui-ch'ü-kou Pass I found the ruins of two posts, meant to guard the route descending the valley, to be situated at an appreciable distance from the points where water can be found at present.[5] This fact seemed to me evidence of desiccation since these little stations were erected.

[1] See *Desert Cathay*, ii. pp. 262–333.

[2] See Map No. 86. D. 2, *circ.* 97° 50′ long., 39° 34′ lat.

[3] See Map No. 84. A. 1. The ruins consist of a walled enclosure in stone about 180 feet square, with defensible quarters and a keep in one corner.

[4] See Map No. 84. D. 1; for views of Ch'ang-ma, *Desert Cathay*, ii. Figs. 218, 221. I am unable at present to verify the exact spelling of the name, which, as pronounced locally, sounded *Chong-ma*.

[5] See Map No. 86. B. 1.

Change of climatic conditions near T'u-ta-fan.

A striking change, however, came over the ground on ascending towards the T'u-ta-fan from the gravel plateau beyond the Po-yang Ho.[6] The broad valley leading up to this pass, the westernmost of those which cross the Richthofen Range proper, proved to be clothed with luxuriant grass and flowers that recalled true Alpine vegetation. It was the first, but sharply marked, indication of the distinct change in climatic conditions which was subsequently observed right through the Nan-shan ranges south-eastwards and, in a lesser degree, also in the submontane tracts adjoining them on the north. We were here leaving behind the extreme south-eastern limits of the great arid belt of innermost Asia, as represented by the Tārīm Basin and the adjoining drainageless areas, and were entering that westernmost portion of true China which, remote as it is, is affected in its climate by the increased moisture passing up from the Pacific.

Physical divisions meet near Chia-yü kuan.

It is important that we should realize clearly the meeting at this point of two great physical divisions of Asia; for this geographical fact has had its manifest bearing upon the position of what has been the recognized main western entrance into China for the last five hundred years, if not longer. I mean the famous Gate of *Chia-yü kuan*, the modern representative of the ancient Jade Gate. Its distance from the debouchure of the T'u-ta-fan valley is less than twenty-five miles, and the contrast between this verdant alpine vale and the arid wastes of the Nan-shan beyond it to the west is scarcely more striking than the change experienced by the traveller as, having crossed a vast stony steppe from the west, he reaches the 'Great Wall' and, through the Gate of Chia-yü kuan, passes into the succession of fertile tracts within. My own approach to this western end of the 'Great Wall' was singularly adapted to bring out the big features of its topographical setting. So I may well briefly describe it before discussing Chia-yü kuan itself.

First sight of 'Great Wall'.

I had my first sight of the Great Wall, and a very impressive one, when after descending from the T'u-ta-fan I rode on the evening of July 18 along the fantastically eroded foot-hills of the Nan-shan eastwards to the hamlet of Ta-han-chuang.[7] To the north an utterly lifeless steppe of stone and gravel, fully twelve to fifteen miles wide, was seen to separate this fringe of the snowy Nan-shan from a terribly bare hill range running parallel to it and forming a south-eastern offshoot of the Pei-shan. As I looked down from a height of close on 8,000 feet, the view ranged unbroken along this vast valley or plateau eastwards. Far away in the distance low gravel ridges, marking the watershed towards the Pei-ta Ho, seemed to form an eastern rim of the plateau. Along this the setting sun lit up a long-stretched faint streak of white—the line of the 'Great Wall'. The distance separating me from its nearest point was still close upon twenty miles. But in the clear atmosphere it was possible to make out towers reflecting the slanting rays and, stretching away to the horizon beyond, a great expanse of dark ground. It was the fertile district of Su-chou with its green fields and arbours. Set off clearly against the grey of the steppe and the red of the bare desert hills, it made me realize with my eyes what China 'within the Wall' (*kuan li-t'ou*) meant, and why its border was drawn here.

Approach to Gate of Chia-yü kuan.

The little fortified post of Ta-han-chuang (Fig. 251), which I visited next morning, was tenanted by a few soldiers as an outpost of Chia-yü kuan to watch the route along the foot of the mountains. Its massive watch-tower and the small walled enclosure adjoining, both half-ruined, seemed an apt illustration of what posts on the ancient Han Limes might have looked like, though in a far more desolate setting. The same day a long weary march brought us transversely over the bare stony 'Sai' of the valley to a point on the high road about four miles west of Chia-yü kuan. All view of the wall and its great Gate had vanished in the glare of the day. Instead there loomed before us the eastern extremity of the long barren range already referred to as overlooking the valley from the north. A glance at its steep serrated ridges, furrowed by a maze of narrow ravines, sufficed to

[6] See Map No. 86. D. 2; *Desert Cathay*, ii. Fig. 220.

[7] See Map No. 86. D. 2.

show that it must have served at all times as a great natural flank protection for the route towards An-hsi and Central Asia which skirts its foot for three marches. Not far from the point where we struck this high road a small valley, known as Hao-shan-k'ou,[8] receives the subsoil water from the Nan-shan, which comes to the surface here and cuts through the south-eastern end of the range. Some large towers perched on low spurs seem intended to guard the approach to it. As I followed the narrow cart track leading towards Chia-yü kuan, I felt that I was on historical soil; for there can be no question that it was this very line, the most direct and convenient connecting Su-chou with An-hsi and Tun-huang, over which all Chinese enterprise, military, political, commercial, towards the 'Western regions' must have moved for over two thousand years.

Fortress and walls of *Chia-yü kuan.*

After four miles of gentle but steady rise over stony waste, the top of a broad ridge was reached which bears at its eastern edge, and on a level about 80–100 feet lower, the closing fortress and wall of Chia-yü kuan 嘉峪關. The high storied towers over the inner and outer west gates (Fig. 249), built of wood, first came into view from a distance of about two miles; then, on closer approach, also the wall of stamped clay extending from either flank of the massive square fortress which guards this gate of the 'Middle Kingdom'. On the south, its line could be seen stretching away for a distance of about six miles to where Pei-ta Ho, or Su-chou River, skirts the foot of a projecting buttress of the Nan-shan (Fig. 250). Northward, the wall soon becomes hidden by the scarp of the ridge on which we stood. But some four miles off its line could be picked up again ascending a rugged spur above the north-eastern end of the Hao-shan-k'ou gorge. Eastwards, the vista from the ridge ranged far over the vast plain that slopes gently down towards Su-chou and is green with fields and trees.

Advantages of defensive position.

Standing on this commanding edge of the plateau it was easy to see—and the map shows it, too, with almost equal clearness—that if a barrier had to be drawn across the great natural route from the west to close approach by it to the long stretch of cultivated tracts along the foot of the Nan-shan, no better position could be chosen than this. Nowhere else was it possible to guard the broad valley between the foot of the snowy range and the desert hills of the Pei-shan with such ease. On this line the two approached within less than eight miles of each other, and excellent natural protection was provided on either flank, by the Pei-ta Ho on the south and the precipitous and practically impassable ridges northward. For a border policy which aimed at strict seclusion involving passive defence—and that this was in full force when Chia-yü kuan first comes into notice we know from history—there were obvious advantages, too, in the utter barrenness of the stony glacis in front, stretching westwards for more than twenty miles, and in the abundance of local resources immediately behind the protected line.

Puzzling alignment of border walls.

But while the eye took in easily the sound topographical reasons for selecting this position for the barrier, the distant and clear view from that ridge revealed also what seemed an archaeologically puzzling observation. Quite distinct from the line of wall before me that ran with an approximately north-western bearing towards the debouchure of Hao-shan-k'ou, another line of wall and towers, less well preserved but still unmistakable in its alignment, was seen to stretch far away to the north-east. I knew well that all books and maps, whether Chinese or European, made the 'Great Wall' which protects the northern border of Kan-su terminate in an imposing line which bent round the westernmost portion of the Su-chou district to the very foot of the Nan-shan. But the wall which was now seen to run, as the map (No. 88. B. 1) shows, in the direction from south-west to north-east did not look like a continuation of the barrier extended on either side of Chia-yü kuan. It manifestly

[8] *Hao-shan-k'ou* 壕山口 is the correct name of this little valley, which I shall have occasion to mention again in connexion with the defences of Chia-yü kuan. The form *Tuan-shan-k'ou* (*chia-tzŭ*) in Map No. 88. B. 1 is due to an error of reading.

adjoined the latter at right angles, and did that at such a distance from its northern end as to make a different period of construction, or at least a different purpose, appear likely at the outset.

Entry *intra murum.*

This curious observation was an additional inducement for me to spare a day for a survey of these walls, though the historical notices to be discussed below *a priori* precluded the assumption that they were of any great age. Before, however, recording the result of my investigation, a brief description of Chia-yü kuan itself, as it presented itself to me, may conveniently find a place here. Modern as the existing gate-fortress is—competent local opinion ascribed its construction to the Emperor Ch'ien-lung (A.D. 1736–96), and there seemed to me much to support this dating—yet in more than one aspect it was bound to recall to my mind the rôle which the Yü-mên kuan had filled on the ancient Tun-huang Limes, however different the times and the setting. For the very pleasant welcome which awaited me on my entry *intra murum*, or '*kuan li-t'ou*', as the Chinese phrase puts it, I may refer to my Personal Narrative.[9] But it did not need the cheerful impression thus created to convince me that Chia-yü kuan fully merits to bear its name, which means, 'The barrier of the pleasant valley'.[10] Immediately behind the wall to the south of the little gate-fortress there extends a delightfully green expanse of tree-bordered meadows. This refreshing verdure is due to a series of fine springs which issue in a shallow depression at the eastern foot of the gravel ridge previously mentioned facing Chia-yü kuan and its wall. It is from these plentiful springs that the fields of Ti-wan, a fertile village area to the north of Chia-yü kuan comprising about two hundred households, receive their irrigation.

Meaning of name *Chia-yü kuan.*

Castrum-like plan of gate-fortress.

Chia-yü kuan itself, with the battlemented walls and towers of its square circumvallation in fair repair (Fig. 249), is a typical example of a Chinese *castrum* fortified on mediaeval lines. Three successive gates leading through massive bastions and inner defences give access on either side to the single broad street traversing the station from east to west. I found most of the houses within deserted and in ruins, except for the commandant's Ya-mên and the quarters of the small garrison that counted some scores of men. But there was enough to show me the importance which official tradition still attaches to the place. In the Emperor Ch'ien-lung's time evidently an effort had been made to give a truly imposing appearance to this western gate κατ᾽ ἐξοχήν of the Empire.

Guard-station for policing administrative border.

Yet even then Chia-yü-kuan must have lost any military value that the position may have offered at one time, and remained of importance solely as a guard-station for policing the inner administrative border of the Empire; for the policy of Central-Asian expansion resumed under the Emperor K'ang-hsi had already before the close of the seventeenth century carried the command of the Chinese troops protecting the western frontiers as far west as Kua-chou and Tun-huang.[11] The historical notices to be discussed below will show us how Chia-yü kuan ever since Ming times had served as the place where all traffic from 'outside the Wall' was subjected to close police control. The conquest of Chinese Turkestān under Ch'ien-lung must necessarily have affected the purpose and methods of this control. But its essential features survived here to our own times; for Chiang Ssŭ-yeh was still able to show me the little police-post within the inner west gate where travellers bound for the New Dominions or returning had to produce their papers when he himself had last

[9] Cf. *Desert Cathay*, ii. pp. 276 sqq.

[10] As rendered by Mr. Rockhill; see Prof. Cordier's note, Yule, *Marco Polo*, i. p. 193. If the second character in 嘉峪關 means literally 'pool in ravine' (see Goodrich, *Pekingese Syllabary*, p. 234), the name would fit the actual features of the locality still more closely. But cf. Giles, *Chinese Dictionary*, p. 1687.

The erroneous notion that *yü* in the name of Chia-yü kuan was the same as *yü* 玉 in the name of Yü-mên, or the 'Jade Gate', has caused confusion in the past; see e.g. Ritter, *Asien*, ii. pp. 211, 213; Yule, *Cathay*, iv. p. 239, with Prof. Cordier's rectifying note, iv. p. 271. The right meaning of the name was duly recorded by Prof. de Lóczy in 1879; cf. *Kina*, p. 487.

[11] Cf. Ritter, *Asien*, ii. pp. 370 sq. In 1711–12 Jesuit topographers under K'ang-hsi's orders had already fixed the position of Hāmi and connected it by a route survey with Chia-yü kuan; see *ibid.*, ii. p. 373.

passed through seventeen years before. In the same way Chia-yü kuan still retains the character of a customs station, where duty is levied on all goods passing from Turkestān into China proper by the high road.

SECTION II.—THE WALLS OF CHIA-YÜ KUAN

That the line of wall flanking Chia-yü kuan and completing the barrier, or 'chiusa', to the south and north-west[1] is in its present state coeval with the modern gate-fortress itself, or else was thoroughly repaired at the time of its construction, was made clear from the first by its good preservation almost throughout. Yet its examination offered distinct points of interest, were it only by its being a late pendant to the Limes wall that I had traced past the Yü-mên of Han times. My survey of the north-western section of the wall showed that it starts from the north-east corner of the *ch'êng* of Chia-yü kuan and continues unbroken along the eastern foot of the precipitous hill range through which the stream of Hao-shan-k'ou has cut its narrow valley, as described above. The wall consists of a well-built clay rampart 11 feet thick at its base and 12 feet high, with a parapet about 4 feet high on its top. Adjoining this wall on the inside are watch-towers, which stand at an average distance of about $1\frac{1}{2}$ miles one from the other. The tower nearest to the Gate, of which Plate 47 reproduces the ground-plan, measures 36 feet by 33 and is built, like the wall, of layers of stamped clay 4–5 inches in thickness.[2] The top of the tower bears a loopholed wall about 6 feet high, as well as a small watch-room in one corner. A double line of foot-holes ascending one of the sides was intended to help the watchmen, who had to climb up by a rope. A brick-built wall, of the same height as the main wall but of only half its thickness, forms an enclosure round the tower. Small ruined quarters within were meant to shelter the soldiers who were to provide the watch and to guard this section of the wall. Thus each tower could serve as a rallying-point and be defended independently in case of need, just as on the ancient Limes. *Line of wall flanking Chia-yü kuan.*

Outside the line of wall, and at distances varying from one to two furlongs from it, there rise three detached towers of massive but modern-looking brickwork, built on spurs at the foot of the hill range westwards. The towers, measuring about 40 feet at their base and over 30 feet high, are surrounded by square entrenchments and obviously intended to serve as outworks guarding the ravines which descend from the scarp of the range and could not be effectively watched otherwise.[3] The wall at a distance of about a mile from the third of these outlying towers reaches the hamlet of Huang-ts'ao-ying, which clusters behind it, at the mouth of the Hao-shan-k'ou gorge. Thence crossing this well-cultivated ground and the little stream which irrigates it, the wall runs on for half a mile more and is carried up the rocky spur on its left bank to a height of about 200 feet above the bottom of the valley; beyond this the precipitous rock face becomes practically unscalable. Here the wall ends with its flank excellently protected by nature. The rugged range, of which this spur is an offshoot, continues to ascend unbroken north-westwards till it attains, as the map shows, a height of over 9,200 feet at a direct distance of about 10 miles. All along this distance, and beyond too, the range with its very steep cliffs, absolutely bare of vegetation (Fig. 253), forms an impassable barrier needing no defence. *End of north-west section of the wall.*

It was curious to note how much care had been taken to defend also the triangular area formed by that portion of the mouth of the Hao-shan-k'ou valley which lies outside the main wall just described. From the point where this approaches the first farms of Huang-ts'ao-ying on the south, a short branch wall strikes off from it at right angles to the south-west and is carried up the steep *Wall closing Hao-shan-k'ou valley.*

[1] See Map No. 88. B. I.

[2] In Pl. 47 the tower is shown by an error of the draughtsman as built of brick.

[3] At T. IX. a of the Limes west of Tun-huang we have met already with an outlying watch-post of corresponding position and purpose; see above, p. 662.

spur which flanks the debouchure of the stream on the right bank. It ends where the cliffs on this side too become impracticable. As I followed the little valley, cultivable all along its bottom, upwards for about a mile I found it closed, where it narrows to about 200 yards across, by a battlemented wall which resembles in construction the main wall of the Chia-yü kuan 'barrier',[4] and is in any case of no great age; for the many loopholes piercing it, a true 'chiusa', were manifestly intended for fire-arms. This wall, which was in good preservation except for the middle portion exposed to damage from the stream, faced with its parapet to the south-west, i. e. up the valley. Its purpose could not be doubtful. The precipitous rock walls, rising on either side to heights of 300 to 400 feet with unscalable faces, and the rugged nature of the hill range in general completely protected this closing wall in the Hao-shan-k'ou gorge from being turned. Thus that portion, too, of Huang-ts'ao-ying cultivation which lies outside the main wall was made safe from raids, and the guarding of the latter itself greatly facilitated.

Second wall facing in inverse direction.

But a very puzzling fact faced me when, only some hundred yards higher up in the gorge, I found the remains of another and distinctly older wall on either side of the low ground watered by the stream. It, too, had undoubtedly been meant to close the passage through the valley; but strangely enough its parapet, as seen in Fig. 253 on the left, faced to the north-east, i. e. down the valley. This second wall, though massively constructed, had suffered far more decay than the first. It was built of stamped clay with a thickness of 11 feet at its base, where it rested on a solid stone foundation covered with a layer of rushes; its height, where greatest, was still 11 feet. The parapet, about 2 feet thick and 3 feet high, had no loopholes. Had the gorge been situated somewhere on the Indian North-West Frontier, or on ground similarly affected by internal feuds in the past, it might have been easy to account for two fortified positions facing each other at such close range. But here, on the North-West Frontier of China, such an explanation would find no support in anything that we know of its history. Hence the close proximity of such inverse lines of defence, and both by their very nature manifestly of Chinese origin, was bound to appear from the first in the light of a problem.

Wall line striking off to north-east.

Before indicating what I now consider its likely solution, it will be advisable to complete the account of my Chia-yü kuan survey with reference to another puzzling feature. I mean the line of wall which on my first approach to Chia-yü kuan I had already noticed striking off at right angles from the modern barrier wall and stretching far away to the north-east. It was at the very first of the watch-towers guarding the wall north of the Gate, and only about a mile and a half from the latter,[5] that I found the junction of this distinct line. Its remains were far more decayed, as, in fact, I had noticed from a distance, and closer inspection at once produced evidence of a different, and probably earlier, date of construction. This wall, also built of stamped clay like the Chia-yü kuan barrier, shows at its base a thickness of $8\frac{1}{2}$–9 feet only as against the 11 feet of the latter. Its height, exclusive of the parapet, is about 8 feet. Of the badly broken parapet only about a foot remained here. The examination of the clay layers also disclosed a striking difference. Whereas in the wall forming the Chia-yü kuan 'chiusa' they are 4 to 5 inches in thickness, those in the older wall touching it here at right angles have a height of 10 to 11 inches.

Decay of north-east wall.

The line of this wall, running south-west to north-east, is, as subsequent inspection showed, broken by many great gaps. But though the aggregate length of these in the section here examined is probably quite as great as that of the parts of the wall still standing, the alignment of the wall

[4] The photograph reproduced in Fig. 253 shows this wall across the valley clearly on the right, against the line *B*. The view is down the valley, looking to the north-east. In the middle, against the cliffs on the left side (*A*), is seen a remnant of the older wall which has its parapet facing north-eastwards. The little black spots on the horizon line above the valley bottom mark clumps of trees at Huang-ts'ao-ying village.

[5] See above, p. 1119.

could be made out without any difficulty. Apart from the straightness of the line itself, there are clear marks of its direction provided by the watch-towers built along it at average distances of about $1\frac{1}{2}$ miles. The two that I was able to examine here measured 25 to 26 feet square at the base and rose to a height of 20 to 22 feet in their present condition. They were built of stamped clay, with layers of the same thickness as the wall which they were meant to guard. But where later repairs had been effected at the top, the material consisted of sun-dried bricks set in vertical courses, after a fashion characteristic in these parts of late work.[6] Cultivation extended right up to the foot of this wall and in places beyond it, affording clear evidence, along with the big gaps already mentioned, that the far advanced decay of this defensive line dated back for a considerable period. At the same time man's destructive vicinity and the moisture brought by irrigation are likely to have accelerated the process.

North-east wall watch-towers.

I may conveniently record here some facts which I was able to ascertain as regards the continuation of this wall further east. They will help, together with what the map shows of the sections actually surveyed towards Su-chou and beyond, to explain its character and origin. From the side of Chia-yü kuan we were able to lay down the line of this wall quite clearly on the plane-table as far as Yeh-ma-wan (Map No. 88. B. 1), where a large fort-like structure could be sighted rising at a sharp bend of the wall. This was said to guard a gate through which passes a direct route coming from Hāmi. In 1914, when making my way to Su-chou from the Su-lo Ho by a route which lies north of the desert range flanking the high road, I was able to verify this statement and found it quite correct. At the same time I ascertained that cultivation, made possible by canals from the Pei-ta Ho, extends in considerable patches as far as Yeh-ma-wan and even slightly beyond. This fact plainly accounts for the curious great bend which the protective line of wall makes here to the north.

Northern angle of wall at *Yeh-ma-wan*.

From Yeh-ma-wan, where I found that the wall was of the same construction and in the same state of decay as near Chia-yü kuan, its line turns to the south-east. Skirting a great expanse of marshy grazing, it continues to a point about $7\frac{1}{2}$ miles due north of Su-chou city (Map No. 88. C. 1). Here, not far from the village of Hsin-ch'êng-tzŭ, I actually examined the wall again on a reconnaissance specially made for this purpose from Su-chou on July 26, 1907. I found its remains there exactly of the same type and condition as seen near Chia-yü kuan. Its line takes thence an easterly direction running roughly along the northern limits of Su-chou cultivation. Subsequently, on my return from Kan-chou in September, 1907, I ascertained that the same wall runs on to the left bank of the Pei-ta Ho, or Su-chou River, near the north-eastern end of the great Su-chou oasis. Starting afresh from the right bank near the hamlet of Ai-mên (Map No. 88. D. 1), it is continued north-eastward to the low desert range along the southern foot of which runs the high road to Kan-chou (Map No. 91. A. 1). Its further course thence to the south-east keeps more or less parallel to this great line of communication and along the right bank of the Kan-chou River. I traced it in 1907 and 1914 to the vicinity of Kan-chou itself; but there is no need to give details here. It will suffice to emphasize the main fact that this much-decayed clay wall, originally, too, neither solid nor imposing, represents the 'Great Wall' of Kan-su as known to present local tradition.

Continuation of wall to Su-chou and Kan-chou.

The questions to be considered here concern firstly the purpose and origin of this wall, and secondly its relation to the 'chiusa' of Chia-yü kuan as it exists at present. If as regards the former question I am able to indicate here what appears to me a safe and definite answer, it is largely due to the results which my explorations of 1914 in this region have yielded. They have proved that the line of the ancient Han Limes did not pass from the great bend of the Su-lo Ho south-east

Wall distinct from Han Limes.

[6] For an illustration of the modern Chinese brickwork of these parts, but applied with more elaboration than usual, see the elevation of a ruined temple wall north of Chin-t'a in Pl. 47.

towards Chia-yü kuan and Su-chou, as I had been led to assume before.[7] In reality a practically unbroken chain of remains shows that it at first continued eastwards past the outlying oasis of Hu-hai-tzŭ or Ying-p'an, well to the north of the An-hsi–Su-chou high road, whence it led far away towards the north-east to beyond the Mao-mei tract on the united course of the Su-chou and Kan-chou rivers.[8] This discovery has made it perfectly certain that the well-known line of wall following more or less the great route from Kan-chou to Su-chou can have nothing to do with the border line drawn on the first Chinese conquest of westernmost Kan-su and with Han Wu-ti's extension of the Great Wall. It must be of much later origin, and everything in the way of archaeological and historical indications combines to support the view expressed to me by local informants that it dates from Ming times.

Wall line marks policy of seclusion.

It was then that the Chinese Empire assumed that policy of strict seclusion towards Central Asia the application of which on this very frontier is so clearly proved by the Western notices to be presently mentioned. A purely defensive line drawn so closely to the limits of the cultivated areas along the foot of the Nan-shan and the high road connecting them would have had no *raison d'être* in T'ang times while China was asserting political and military control over vast portions of Central Asia. When the hold of Chinese imperial power over Kan-su had been brought to an end in most parts by Turkish and Tibetan invasion, a work of this kind manifestly could not be undertaken. While Uigurs, and then Tanguts, held sway over 'Ho-hsi', their power extended not merely over the cultivated tracts which this wall was meant to protect, but also over areas extending far beyond them northward. At that period the construction of the wall would have served no purpose, even if such a scheme of defence could ever have recommended itself to semi-nomadic rulers. The same observation obviously applies also to the period of Mongol dominion over the Empire, when the frontiers of China were kept open more than ever before to intercourse with Central and Western Asia.

Border closed by Mings.

Historical records abundantly attest the complete change of policy which took place on the advent of the Ming dynasty (A.D. 1368) and the rigid system then adopted of closing China's western frontiers to foreign intercourse. This system of seclusion alone can account for the construction of a wall which, unlike the ancient Han Limes, ignores all strategic advantages of the ground and clings closely to the line where a mere policing of the border was easiest. Here we find the explanation at once of the wall being carried always close to the occupied area or else to the high road, even where military considerations would manifestly have recommended a different position,[9] and of the abandonment of oases like Chin-t'a and Mao-mei which could not have been brought within the Wall without making police control over it more difficult. But the most significant indication lies in the fact that this wall ends exactly at Chia-yü kuan. This was the very place during Ming times where, as the concordant accounts of Western travellers prove, the rare missions and caravans annually admitted 'within the Wall' from Central Asia were subjected to close examination before being allowed to enter Chinese territory.

[7] Cf. *Desert Cathay*, ii. p. 282. The erroneous view there expressed was influenced largely by my former interpretation of the double wall closing the Hao-shan-k'ou gorge in inverse directions. The fact that on my reconnaissance of September, 1907, to the north of Chin-t'a I failed to trace the remains of the Han Limes proved also misleading—as negative evidence often does.

[8] See *Third Journey of Exploration*, *Geogr. Journal*, xlviii. pp. 195 sq.

[9] As a striking illustration of this indifference to military advantages, I may refer to the line of wall from Yeh-ma-wan eastwards, as shown by Map No. 88. B–D. 1. The commanding ridges stretching from that point east to the Hsi-mên-k'an defile of the Pei-ta Ho offer an excellent line of defence, as I had occasion to realize when crossing them in 1914. The engineers of the Han Limes would certainly have turned it to good account by taking their border-line along it. The Ming wall instead clings closely to the cultivation edge, where it was easier to maintain police guards for keeping-out unauthorized persons, etc.

This dating from Ming times is also supported by whatever archaeological observations I was able to gather about the wall at the different points where I touched its line. Its state of decay, generally far advanced, and its total disappearance in places, when compared with the fair condition of the wall closing the Chia-yü kuan defile, seemed to me to preclude the assumption that its age reached back only to the Manchu period, i.e. the last two or three centuries. On the other hand, it appears to me distinctly improbable that a wall of stamped clay, of no great thickness and lacking the special protection of those reed or brushwood fascines which so effectively reinforced the ancient Han wall of the Limes, could in localities exposed to wind-erosion or else to moisture have anywhere remained standing to such a height, as e.g. the segment of it seen in Fig. 254 shows, if it had been built many centuries ago. Taking into account the climatic conditions also, which grow distinctly less arid as we follow the line of the wall south-eastwards to Kan-chou and Liang-chou, a *terminus a quo* is thus indicated which fits well the assumption that the wall was first constructed under the Ming dynasty. From the fact that Shāh Rukh's embassy in A.D. 1420, as we shall presently see, found the police control of the western frontier already fully established at Chia-yü kuan, we may conclude further that the wall, too, was in existence by then. The fifty odd years intervening since the accession of the Ming dynasty allowed ample time for the erection of the wall and the perfection of the system for which it was needed.

Wall dates from Ming times.

There still remains the question of the relation between the wall that we have examined and the line closing the Chia-yü kuan passage, as it now runs from the left bank of the Pei-ta Ho in the south to the Hao-shan-k'ou defile in the north. That this wall in its present condition is distinctly more recent than the former, and also different in construction, I have already shown. It appears to me easiest to account for the relation between the two in the following way. Some time after the accession of the Manchus, perhaps under the great Emperor K'ang-hsi (1662–1723), when the 'forward policy' leading ultimately to the conquest of the 'New Dominions' had begun, the long police border of Ming times, then probably already largely in ruins, was replaced by a fortified line at Chia-yü kuan. This, by effectively closing the great highway from the west, could serve a good military purpose in case of need. Though frontier garrisons of importance had already been pushed forward to Bulungir and Tun-huang before 1697,[10] the danger of attack from the powerful Dzungar or Eleuth tribes in the north-west was not finally removed until imperial authority was established over the whole of Eastern Turkestān by their final destruction in 1757.[11]

Origin of fortified line at Chia-yü kuan.

Under these conditions the construction of the extant closing line of Chia-yü kuan was of distinct military advantage.[12] Su-chou must have then, just as during the operations leading to the re-conquest of Chinese Turkestān in 1877 after the last great Tungan rebellion, served as the main base of supplies, etc., for the imperial forces. By the defence of the Chia-yü kuan 'chiusa' Su-chou was protected from any serious direct attack. About that period, I suppose then, the old wall already in existence from the foot of the detached rugged ridge overlooking Chia-yü kuan to the left bank of the Pei-ta Ho was repaired and put into its present state. At the same time this section of the wall, running approximately from south to north, was prolonged to the north-west so as to close also the debouchure of the Hao-shan-k'ou gorge, through which the Chia-yü kuan position could easily have been turned. I must leave it to others who have access to Chinese historical works to ascertain whether the conjectural explanation here offered finds support in original records, as far as such may be available. From the antiquarian and topographical points of view it affords a very likely solution of what otherwise would appear a very puzzling relation.

Military advantages of Chia-yü kuan line.

[10] Cf. Ritter, *Asien*, ii. pp. 370 sq.

[11] See *ibid.*, ii. pp. 459 sq.

[12] According to a notice quoted by Ritter, *Asien*, ii. p. 211, Chia-yü kuan was the gathering-place and starting-point for the army which the Emperor Ch'ien-lung in 1754 sent forth for the conquest of the Dzungar power.

Explanation of double walls in Hao-shān-k'ou defile.

It is only left for me to recur to the curious detail previously noted about Hao-shan-k'ou, the two walls facing each other across the middle of the gorge. In the lower and later wall, with its parapet facing south-west, we obviously have an outwork of the Chia-yü kuan 'barrier' wall, rendering the portion outside Huang-ts'ao-ying more secure. As regards the upper and older wall facing to the north-east, the most likely explanation appears to me to be that it was built for the purpose of protecting the high road to the west of the Chia-yü-kuan Gate from attacks of robbers and the like. It is very improbable that the Chinese, even during the period of seclusion in Ming times, could have left the great route westwards without such protection as advanced stations would assure. The account of Shāh Rukh's embassy distinctly mentions its reception by Chinese officials [13] at several points 'in the desert' before reaching the Chinese frontier at Chia-yü kuan. On the other hand, we see from Benedict Goës' narrative how much need there was for such protection in view of the general insecurity prevailing in his time on the route from Hāmi to Su-chou.[14] In addition there is the exact analogy of the advanced watch-towers which were maintained in Han times beyond the point where the Lou-lan route left the Tun-huang Limes,[15] and of those which Hsüan-tsang had to pass after going outside the Yü-mên of early T'ang times.[16] If the Hao-shan-k'ou gorge was thus closed during Ming times by a wall preventing access to the high road, the latter was rendered safe, at any rate against attacks from the north, for some distance beyond the Chia-yü kuan gate; for the very precipitous range on the north is crossed by no practicable track until we come to the gorge through which the Po-yang Ho has cut its way towards the small basin of Hu-hai-tzŭ (Map No. 86. D. 1).

Early notices of Chia-yü kuan Gate.

Having now completed our survey of Chia-yü kuan and cleared up the origin of its walls, we may turn to the notices which early travellers from the West have left us of this famous gate into China. That Marco Polo, who must have passed the defile of Chia-yü kuan on his way from Sha-chou to Su-chou, makes no reference to the site is easily understood in the light of the preceding explanations. At the time of his passage the walls closing Chia-yü kuan and bending round the westernmost border of Ho-hsi were not yet built. It is true that the Chinese mission to Khotan of A.D. 938 mentions a defile called the 'Gate of Heaven' in a position a hundred li to the west of Su-chou, which manifestly corresponds to that of Chia-yü kuan.[17] But even if a watch-station was maintained here after the Mongol conquest of China, it could not have been of any special importance in the days when the great Kublai Khān's reign kept China open to intercourse with the West.

Karaul passed by Shāh Rukh's embassy.

Conditions had completely changed when the embassy sent by Shāh Rukh passed here in A.D. 1420.[18] The envoys, accompanied by many merchants, spent twenty-five days on their way through the Great Desert from Hāmi. On the last few marches 'near the frontier of China Proper' they were fêted in great style by Chinese officers who had come to meet them. 'On their arrival at a strong castle called *Karaul*, in a mountain defile, through the middle of which the road passed,[19] the whole party was counted and their names registered before they were allowed to proceed. They

[13] See Yule-Cordier, *Cathay*, i. p. 273.

[14] Cf. *ibid.*, iv. p. 240.

[15] See above, pp. 638 sqq., regarding the towers T. I, II.

[16] Cf. Julien, *Vie*, pp. 17, 24 sqq.; below, pp. 1144 sq.

[17] Cf. Rémusat, *Ville de Khotan*, p. 77. A 'passage named the Gate of the Jade Stone' is mentioned in the same report a hundred li to the west of the Gate of Heaven. There is a temptation to take this as referring to Yü-mên-hsien, but the distance in that case is greatly under-estimated.

[18] See Yule-Cordier, *Cathay*, i. pp. 273 sq., for an abstract translation from 'Abd-ur-Razzāq's' narrative of the mission; also the translation by E. Rehatsek in *Indian Antiquary*, ii. (1873) pp. 75 sqq.

[19] Rehatsek's translation, *Indian Antiquary*, ii. p. 76, describes the position more closely: 'Qarâwul is a very strong fort among the mountains, and can be entered only on one side by a road which also leads out of it on the other.'

Cf. also a translation of the same narrative which Ritter, *Asien*, ii. p. 211, quotes from Thévenot, *Relation de Voyage*, Paris, 1696, t. II. fol. 3 (not accessible to me).

then went on to *Sukchau*, where they were lodged in the great *Yam-khaan* or Post-house, at the City Gate.' That the place here referred to under the Turkī designation of *Karaul*, meaning 'watch-station', is identical with Chia-yü kuan was duly recognized by Sir Henry Yule and is subject to no doubt. The description clearly indicates that the 'chiusa' then maintained there was more or less of the same type as we see it at present.[20]

Account of Chia-yü kuan recorded by de Busbeq.

Less than a century and a half later we receive an exactly corresponding account of this frontier station in the very interesting relation about Cathay which Gislen de Busbeq, Charles V's ambassador to the Porte (1555–62), took down from the mouth of a Turkish Dervish.[21] This intelligent and observant 'Turkish vagabond' had travelled to distant Cathay, with a caravan to which he apparently attached himself, from the Persian frontier. 'After a fatiguing journey of many months they came to a defile which forms, as it were, the barrier gate of Cathay. For a great part of that empire consists of inland country, and here there was an inclosing chain of rugged and precipitous mountains, affording no passage except through a narrow strait in which a garrison was stationed on the king's part.[22] There the question is put to the merchants, "What they bring, whence they come, and how many of them are there?" The answer being given, the king's guards pass it by signal—by smoke if in daylight, by fire if by night—to the next watch-tower; they to the next, and so on, till in a few hours the message reaches the king at Cathay: a thing which would by any other communication require many days. The king sends back his orders in the same manner and with equal rapidity, saying whether all shall be admitted, or only a part, or the whole put off.'

Interest of Turkish Dervish's account.

The whole account is one of distinct interest. It describes quite correctly the position of Chia-yü kuan and the system of controlling the admission of foreigners as worked there in Ming times. The reference to the use of fire-signals further proves that the chain of watch-towers along the line of the border wall which it presupposes must have then still been maintained in fair order. Incidentally we receive here the fullest description I can trace in Western sources of that early Chinese system of optical telegraphy which the documents discovered by me along the Tun-huang Limes so abundantly attest for Han times.[23] We can scarcely attach blame to our wanderer, remarkably matter of fact as he is in almost all his statements, for crediting this system with a higher degree of precision than it could ever have aimed at; for obviously foreign visitors were dependent in this respect upon such explanation of the messages transmitted, etc., as the Chinese in charge chose to give them.

Benedict Goës' passage through Chia-yü kuan.

At any rate, if our next Western informant about Chia-yü kuan, Benedict Goës, had accepted this statement about the use of the fire-signal service, he would have had reason in his own case to complain of its having been worked with excessive slowness. From the closing portion of the pious traveller's story as preserved by Ricci[24] we learn that from 'Camul', i.e. Hāmi, 'they came in nine days to the celebrated northern wall of China, reaching it at the place called *Chiaicuon*, and there

[20] As Sir Henry Yule rightly pointed out, there is a distinct resemblance between the way in which Shāh Rukh's embassy was received here and what the extracts preserved from the work of the Arab traveller Ibn Muhalhil (*circ.* A.D. 941) record about the treatment which those 'desiring to enter China from the Turkish countries' received at the *Maqām-ul-Bāb* (House of the Gate) 'in a sandy region' and further on at the *Wādī-ul-Maqām* (Valley of the Station), etc.; cf. Yule-Cordier, *Cathay*, i. pp. 251 sq. The localities meant cannot be definitely identified; but the passage shows how deeply rooted in tradition was the system of controlling admission of foreigners on this frontier.

[21] See Yule-Cordier, *Cathay*, i. p. 297.

[22] The text in *A. Gislenii Busbequii omnia quae extant*, Amstelodami, 1660, p. 327, runs as follows: 'Postquam multorum mensium labore ad angustias ac veluti claustra regni Cathaini perventum est (nam bona pars ditionis regis Cathay mediterranea est, asperis montibus praeruptisque saxis circumdata, nec potest intrari, nisi per certas fauces, quae regis illius praesidiis tenentur), ibi mercatores interrogantur,' etc.

[23] Cf. above, pp. 753 sqq.

[24] Cf. Yule-Cordier, *Cathay*, iv. p. 239.

they had to wait twenty-five days for an answer from the Viceroy of the province.[25] When they were at last admitted within the wall, they reached, after one more day's travelling, the city of *Sucieu*.' It was there at Su-chou that 'Benedict parted with his last lingering doubt as to the identity in all but name of Cathay and China'. But that he was destined to be detained there for sixteen weary months longer until death relieved him of all trouble in April, 1607, is striking proof of the vigour with which the temporary admission of foreigners was controlled even after they had been allowed to pass through the Gate of Chia-yü kuan.[26]

Section III.—SU-CHOU AND THE CENTRAL NAN-SHAN

Importance of Su-chou since Han conquest.

The city of Su-chou 肅州, which I reached from Chia-yü kuan on July 22, has, as far back as our historical records permit us to go, been always a place of very considerable importance. On this account I felt glad that the stay of six days, which arrangements for my explorations in the Nan-shan obliged me to make there,[1] allowed me to acquaint myself to some extent with its local conditions and surroundings. We have had already occasion to note that immediately after the Emperor Wu-ti's conquest of the territories along the northern foot of the Nan-shan the Chiu-ch'üan command was established for the purpose of organizing the newly annexed region, with headquarters at what is now Su-chou.[2] We have also found the important part which the command there located took in extending and consolidating the Limes line to and beyond Tun-huang clearly attested by an original Limes document.[3]

Agricultural produce and trade of Su-chou.

Owing to plentiful irrigation assured by the Pei-ta Ho and other rivers which bring down the drainage of three snowy ranges of the Nan-shan,[4] the extent and fertility of the cultivated area of the district are great. They have made Su-chou the natural main base of supplies for all Chinese enterprise directed towards the 'Western regions'. This rôle has been retained by the place from early Han times down to modern days; for it was mainly at Su-chou that the campaign of 1877 resulting in the successful reconquest of the 'New Dominion' was prepared. Only after resettling the district, then wholly depopulated by the Tungan rebellion, were the means secured for moving an army across the desert north-westwards.[5] For the same reason Su-chou must always have been important as an emporium of trade as long as commerce in silk and other Chinese products flourished along the Central-Asian highways.[6] Even now, when conditions have greatly changed

[25] We are told further on that the Viceroy of the province of *Scensi*, i.e. Shen-hsi, to which these frontier districts then belonged, resided at Canceu, i.e. Kan-chou.

[26] William Finch, too, when recording in 1611 information gathered at Lahore about Central-Asian trade routes, knew of Chia-yü kuan. He clearly refers to it in his notice of the trade from Yārkand to 'China, the gate or entrance whereof is some two or three moneths journey from hence. When they come to this entrance, they are forced to remaine under their tents, and by license send some ten or fifteene merchants at once to doe their businesse; which being returned, they may send as many more. But by no meanes can the whole caravan enter at once.' Cf. Stein, *Journal of the Punjab Historical Society*, vi. pp. 144 sq.; *Purchas His Pilgrimes*, vol. I, bk. iv, ch. 4, p. 434.

[1] Cf. *Desert Cathay*, ii. pp. 285 sqq.

[2] See above, p. 724; Chavannes, *Documents*, p. v, note 5, gives 115 B.C. as the most likely date for the establishment of the Chiu-ch'üan command.

[3] See above, pp. 740 sq.

[4] As Maps Nos. 88, 89, 92 show, the Pei-ta Ho and Hung-shui-pa Ho drain big valleys flanked by the Alexander III, To-lai-shan, and Richthofen ranges; the crests of these for great distances are covered with permanent snow, if not ice. In addition to these rivers a series of streams coming from the northern face of the Richthofen range helps to irrigate numerous clusters of villages along the foot of the mountains; see Map No. 88. C, D. 2, 3.

[5] It is largely to the Su-chou district that the well-known story applies of the reconquering Chinese army under Liu Chin-t'ang and Tso Tsung-t'ang having halted on the way for a year or two to sow the fields in tracts laid waste and to reap their harvest before continuing the advance towards Turkestān. A close study of that campaign would throw interesting side-lights on various aspects of the operations by which the Chinese armies of Han times pushed their way into the Tārīm Basin across formidable deserts, and on their methods of organization.

[6] Cf. the account of the Persian merchant Ḥājī Muḥammad interviewed by Ramusio at Venice about A.D. 1550,

and in a sense distinctly unfavourable to Chinese exports along this ancient route, Su-chou still remains a flourishing town with considerable commercial activity, many of the needs of south-western Mongolia being supplied from this place and from Kan-chou.

Spring of *Chiu-ch'üan.*

It does not come within the scope of my task to attempt to trace the history of Su-chou, for which the dynastic Annals and other Chinese records must supply materials in abundance.[7] That ancient remains on the surface to illustrate it are wanting can in no way cause surprise, considering the climatic conditions, the character of the ground, and its long-continued occupation. The city of Su-chou, rebuilt after complete destruction during the great Tungan rebellion, would have no proof to offer of the antiquity of its site, were it not for the fine spring of *Chiu-ch'üan* 酒泉, the 'Fountain of Wine', less than a mile from the north-east corner of the city walls, which gave it its ancient designation. The temple precincts and garden which adjoin this famous spring provided me with delightful quarters on each of my visits to Su-chou.

Great valleys between Nan-shan ranges.

The weeks of hard travel I spent during August, 1907, among the high ranges of the Nan-shan to the south of the tracts between Su-chou and Kan-chou were devoted purely to geographical work. For the results of our surveys I must refer to Maps Nos. 88, 89, 91–4 and to my Personal Narrative.[8] But the observations there made were not without historical interest in some respects. Once the narrow gorges lay behind us in which the streams draining the north-eastern slopes of the Richthofen Range have cut their way down to the submontane plateaus, our progress led across a succession of magnificently wide upland valleys, as open as any of the Pāmīrs, but incomparably richer in vegetation. I refer to the great valleys which divide the high snow-crowned crests of the

Yule-Cordier, *Cathay*, i. p. 291; also that of Goës, *ibid.*, iv. p. 242.

The former gives interesting and accurate details about the wild rhubarb which grows in abundance in the mountains south of Su-chou and which, as Marco Polo's reference in connexion with *Succuir* shows, must have been an important article of trade there during the Middle Ages, if not earlier also; cf. Yule, *Marco Polo*, i. p. 217; also *Desert Cathay*, ii. p. 305.

[I may conveniently point out here how closely the observations that I made in the valleys on either side of the Richthofen Range south of Su-chou bear out the description heard by Ramusio from the mouth of his Persian trader: 'Then he told us that the rhubarb grows over all that province, but much the best is got in a certain neighbouring range of lofty and rocky mountains, where there are many springs, with woods of sundry kinds of trees growing to a great height, and soil of a red colour, which, owing to the frequent rains and the springs which run in all directions, is almost always in a sloppy state.'

The reference to the soil of red colour seems to me to point clearly to the boggy valleys near the head-waters of the Ma-so Ho and Hung-shui-pa Ho, the latter of which directly derives its name from these slopes of bright red clay; see *Desert Cathay*, ii. pp. 308 sqq. Ramusio was specially interested in Ḥājī Muḥammad's data about the rhubarb because 'in the thirty-eighth chapter of Messer Marco Polo's first book he treats of the rhubarb which is produced in the province of *Succuir* and is thence exported into these parts and all over the world'. We are told that Ḥājī Muḥammad 'had himself been to Succuir, coming afterwards . . . to Venice with a large quantity of the aforesaid rhubarb'; cf. Yule-Cordier, *Cathay*, i. p. 290. I did not find any conifers on the route by which I reached the Hung-shui-pa Ho; but fine forests of pine and fir abound in the valleys of the Richthofen Range further to the south-east.]

[7] As regards foreign references to Su-chou it must suffice to point out that the earliest I can trace is contained in one of my Turkish 'Runic' documents from the Mīrān fort, which mentions the 'town of Sugchu'; cf. Thomsen, *Manuscripts in Turkish 'Runic' script*, *J.R.A.S.*, 1912, p. 186; also above, p. 473. For the earlier pronunciation of the name Su-chou 肅州 as *Sukchou*, cf. Yule-Cordier, *Cathay*, iii. p. 126, where Rashīd-ud-dīn's mention of *Sukchū* is discussed.

The same form of the name accounts also for Marco Polo's *Succiu*; see Yule, *Marco Polo*, i. p. 277. [Regarding the plant poisonous to cattle which Marco Polo mentions in the mountains of Su-chou, cf. *Desert Cathay*, ii. p. 303; it is locally known as *tsui-ma-ts'ao*, 'the grass making horses drunk'.]

For the references to Su-chou made by Gardēzī, Shāh Rukh's embassy, Ḥājī Muḥammad, Goës, see Yule-Cordier, *Cathay*, i. pp. 240, 275, 291; iv. pp. 241 sq.

[I may note here in passing that the division of the city into two parts, which Goës' narrative mentions, one for the Chinese, the other for Muhammadans from western regions, is still observed in the present Su-chou.]

[8] See *Desert Cathay*, ii. pp. 297–333. *Map III showing portions of the Western and Central Nan-shan*, on 1 : 1,000,000 scale, published with my paper in the *Geogr. Journal*, March, 1911, and reproduced in *Desert Cathay*, illustrates the main features of the whole mountain area within a convenient compass.

Richthofen, To-lai-shan, Alexander III, and Suess Ranges, and in which gather the head-waters of the rivers of Su-chou and Kan-chou as well as of the Su-lo Ho. From an elevation of about 11,000 feet upwards all these valleys are remarkably easy, forming big basins which are almost flat at their bottom and rise with grassy down-like swellings towards the foot of the flanking ranges.[9] Between that elevation and a height of about 13,000 feet above sea-level they afford excellent summer grazing, far richer than any I had seen since Kashmīr. The extent of this may be estimated from the fact that the open upper portion of the valley of the Pei-ta Ho (Map No. 89) is not less than 70 miles long in a straight line, with a width up to 12 miles or more, while the length of the upper Kan-chou River valley corresponding in character is still greater.

Abundant grazing in high valleys.

It is, of course, the distinctly moister climate which accounts for the abundance of alpine grazing to be found in these high valleys. The contrast with the bleakness prevailing on corresponding ground in the mountains south of An-hsi and Tun-huang is striking. Enough of this life-giving moisture passes over the snowy crest-line of the Richthofen Range to clothe its north-eastern slopes also with abundant vegetation. Where these jut out in broad spurs, as from the Ma-yang Ho eastwards to Kan-chou and beyond, our explorations of 1907 and 1914 have shown not merely fine grazing valleys, but also extensive forest growth. The economic importance of this climatic change is well brought out by the fact already emphasized elsewhere that in the submontane tract south of Kan-chou we soon reach the dividing line beyond which cultivation becomes practicable without irrigation and dependent wholly on rainfall.[10]

Neglect of Nan-shan grazing grounds.

Favourable physical conditions such as these were bound to make the utter neglect of the splendid grazing grounds afforded by those big Nan-shan valleys all the more striking. Mountain tracts, which could maintain tens of thousands of cattle and horses during the summer months and, to a sufficiently hardy race, would afford attractions for nomadic existence quite equal to those of the Alai or of the famous grazing valleys in the Central and Western T'ien-shan, were found absolutely uninhabited during the warmest season of the year. During three weeks of strenuous travel, covering a total marching distance of some 320 miles over such extensive areas as the map shows, we did not meet with a single human being, apart from a few adventurous Tungans working gold pits at an elevation close on 14,000 feet near the watershed between the Hung-shui-pa and Kan-chou river sources.

Chinese policy accounting for neglect.

Racial and political facts combine to explain this neglect. The deep-rooted traditional aversion of the Chinese, where undiluted by other elements, to the life of herdsmen and such nomadic or semi-nomadic existence as it implies is well known. It has always been a factor of fundamental importance for the civilization and history of Eastern Asia. It must necessarily prevent its peoples from exploiting for their own benefit the cattle-raising facilities offered by these Nan-shan valleys. On the other hand, it is equally obvious that, taught by the sad experience of long centuries to apprehend constant danger of aggression from their neighbours in the great plains northward, whether Huns, Turks, or Mongols, and from Tibetan tribes on the south also, the Chinese cannot possibly care for the presence of similar troublesome nomads on the mountain flank of these far-advanced Kan-su marches, the key to Chinese power in Central Asia. It is clear that it must at all times have been a direct interest of Chinese border policy to keep nomads, whatever their race, out of this mountain region. Nor is there reason to doubt that, whenever political conditions permitted, this safeguard was applied with the same ruthless thoroughness which was exhibited in clearing these mountains of all Tungans after the last rebellion.

It appeared, therefore, a strange contradiction to this time-honoured policy when, on my

[9] For photographs illustrating the scenery in these valleys, see *Desert Cathay*, ii. Figs. 236, 238, 241–6.

[10] Cf. *Third Journey of Exploration*, *Geogr. Journal*, 1916, xlviii. p. 199.

descent towards Kan-chou, I came upon small camps of what I took on my rapid passage to be half-Chinified Mongols, grazing cattle and ponies on the forest-girt uplands between the Cha-ho and Li-yüan Ho.[11] I was struck at the time by the fact that their number and that of their herds seemed distinctly small as compared with the available grazing and the manifold advantages of the ground, and also by what I may call the general 'tameness' of their ways. But the true explanation of their presence here, and of the exception which it appeared to form to the conditions imposed by Chinese border policy on this ground, became clear to me only later from a very interesting publication of Colonel (now General) C. G. E. Mannerheim, the distinguished Finnish officer.[12] This showed me that these were the summer camps of a small and now rapidly dwindling tribe, calling themselves Shera Yögurs and speaking a Mongol dialect, whom the Chinese administration of the seventeenth century had purposely transplanted to the Kan-su border from 'outside the Wall' in order to provide itself with useful 'barbarian' auxiliaries against Dzungar inroads from the north-west. The Shera Yögurs consider themselves closely related to the still smaller community of the Sarö Yögurs. These undoubtedly speak a Turkish tongue and are scattered in a few pastoral settlements over the grazing grounds of the sandy steppe which, as Map No. 91. B–D. 2–3 shows, stretches south of the Su-chou–Kan-chou high road, between Shuang-ching-tzŭ and the Kao-t'ai oasis.[12a]

Pastoral tribes at north foot of Nan-shan.

For the origin, racial characteristics, and present conditions of these small tribes, it must suffice to refer to General Mannerheim's valuable ethnographic publication. What interests us here is that they afford an instructive modern illustration of a process which is likely to have occurred more than once since the Chinese Empire, in the interest of its Central-Asian policy, took possession of this 'passage land', as Ritter has long ago rightly called it,[13] along the foot of the snowy Nan-shan. We have direct evidence of this process in a Chinese historical notice which, though it relates to the tenth century, helps to throw interesting light also on the conditions here prevailing in a much earlier period. Kao Chü-hui, when describing the journey along this border of the Chinese mission which started for Khotan in A.D. 938, tells us: 'From Liang-chou, going 500 li westwards, one arrives at Kan-chou. Kan-chou is the camping-place of the Hui-ho (Uigurs). The mountains which are about a hundred li to the south are the territory where, in the time of the Han dynasty, there resided the ancient people called the Little Yüeh-chih. There is a race different from this people, called *Sha-t'o* from the mountain of the deer forest; they are said to be descended from the Ch'u-yüeh race.'[14]

Ancient settlements of Little Yüeh-chih.

The Sha-t'o 沙陀 to whom Kao Chü-hui's relation refers here were a tribe of the Western Turks, first settled in early T'ang times to the east of Barkul, and after A.D. 808 transferred to the northern borders of Kan-su for the sake of protecting them from inroads.[15] Their mention here by

Sha-t'o tribe once settled on Kan-su border.

[11] See Map No. 94. A. 1, 2; *Desert Cathay*, ii. pp. 330 sq. In extenuation of my error in taking these people for Mongols, I may note that on no occasion did we actually halt close to their camps, and that being Lamaists, and speaking only Mongol besides Chinese, they were readily taken by my Turkī followers for 'Kalmaks', i.e. Mongols. I myself had up to that time never met Mongols, and was, therefore, the more easily deceived about the origin of these people whom we unexpectedly encountered.

[12] See C. G. E. Mannerheim, *A visit to the Sarö and Shera Yögurs*, from the *Journal de la Société Finno-Ougrienne*, xxvii, Helsingfors.

[12a] Cf. regarding the origin and language of the Shera Yögurs, Mannerheim, *loc. cit.*, pp. 31 sqq.: regarding their traditional connexion with the Sarö Yögurs, *ibid.*, pp. 6, 33 sq.; for the Sarö Yögurs and their Turkish language, pp. 5 sqq., 61 sqq.

[13] Cf. Ritter, *Asien*, ii. pp. 195 sqq.

[14] Cf. Rémusat, *Ville de Khotan*, p. 76.

[15] About the history of the Sha-t'o, a tribe closely allied with the Ch'u-yüeh, cf. Chavannes, *Turcs occid.*, pp. 96 sq., 272. I take the reference to their later habitat on the Kan-su borders from Ritter, *Asien*, ii. p. 212, who quotes Gaubil, *Histoire de Tang*, xvi. p. 156, a work not accessible to me at present.

I do not know what locality may be meant by the 'mountain of the deer forest'. Can a portion of the Eastern T'ien-shan be intended?

For the part played by the Sha-t'o in the troubled times

Kao Chü-hui obviously implies that they, too, at one time held the mountain tracts through which the preceding rapid survey has taken us. At his own time these must have belonged to the Hui-ho, or Uigurs, 廻紇, then in possession of Kan-chou. But what is of particular historical interest for us is the fact that in Kao Chü-hui's days local tradition evidently still remembered those Nan-shan valleys and uplands having served as grazing grounds for the ancient Little Yüeh-chih of Han times. An important passage of Ssŭ-ma Ch'ien's history tells us that when the Great Yüeh-chih, before masters of the whole region between Liang-chou and Tun-huang, had been defeated by the Hsiung-nu and had started about the middle of the second century B.C. on the great exodus which was to carry them to the Oxus and ultimately, as the Indo-Scythians, to the Indus, 'a small number among them, unable to depart, remained behind and took refuge among the Ch'iang 羌 of the Nan-shan 南山; they received the designation of the Little Yüeh-chih 小月氏'.[16]

Little Yüeh-chih left behind in Nan-shan.

From the Later Han Annals we learn that the Little Yüeh-chih, after having found a refuge among the Ch'iang or Tibetan tribes in the Hsi-ning region, made their submission to the Chinese when the Hsiung-nu had been driven from the Kan-su borders in 121 B.C., and that subsequently a portion of them regained their old seats near Kan-chou.[17] As late as A.D. 189 a reference is made in the same Annals to a revolt which took place among the Little Yüeh-chih settled about Kan-chou against the Chinese administration.[18] There is reason to believe that the object which guided the imperial authorities in this repatriation of a portion of the Little Yüeh-chih was the same as that underlying the later settlement on this ground of the Sha-t'o and Sarö and Shera Yögurs, i. e. to secure auxiliaries for the defence of the border more warlike than the local Chinese. But other remnants of the Yüeh-chih evidently survived in the mountains much further to the west. Thus the *Wei lio*, composed between A.D. 239 and 265, mentions Yüeh-chih remnants, along with various tribes evidently of Tibetan descent, as living in the 'mountains of the South' that stretch from Tun-huang to the Ts'ung-ling.[19] Kao Chü-hui, too, when passing in A.D. 939 through the territory of the Chung-yün 仲雲, a tribe inhabiting the desert mountains west of Tun-huang, records the tradition that 'the Chung-yün are a branch which has remained of the Little Yüeh-chih'.[20] They are described as brave and warlike men, dreaded by the inhabitants of Kua-chou and Sha-chou.

Little Yüeh-chih under Later Han and after.

Little Yüeh-chih in mountains near Tun-huang.

These historical notices, mere glimpses as they are, will help us to appreciate better the important bearing which the favourable physical conditions prevailing in the valleys and uplands of the Central Nan-shan must have had upon the history of the territory stretching along its northern foot from Liang-chou to Su-chou and beyond. Were it not for the abundant summer grazing grounds to be found there, this narrow belt of cultivable ground between the foot of the Richthofen Range and the arid sandy wastes adjoining it northward would certainly not have played the part it has in history as a coveted goal of conquest for a long succession of nomadic nations such as the Wu-sun, Yüeh-chih, and Hsiung-nu, Tibetans and Uigurs, Tanguts and Mongols.

Importance of Nan-shan grazing.

For the Chinese, indeed, who ever since their first occupation more than two thousand years ago have struggled to keep nomadic invaders out of this 'land of passage', its possession was indispensable, quite irrespective of the physical aspects of those mountains; they needed it because it

Nan-shan on flank of Chinese 'passage land'.

following the downfall of the T'ang dynasty, cf. Chavannes, *Turcs occid.*, p. 272.

[16] Cf. Chavannes, *T'oung-pao*, 1905, p. 527, note 1. As regards the extent of the territories originally subject to the Yüeh-chih before their expulsion by the Hsiung-nu, cf. Franke, *Zur Kenntniss der Türkvölker*, p. 27, quoting Ssŭ-ma Ch'ien's *Shi chi*, chap. CXXIII; see also *ibid.*, p. 26, for a corresponding statement of the Later Han Annals.

[17] See Franke, *Zur Kenntniss der Türkvölker*, p. 26, quoting *Hou Han shu*, chap. CXVII.

[18] Cf. Franke, *loc. cit.*, p. 27.

[19] See Chavannes, *T'oung-pao*, 1905, pp. 526 sqq.

[20] Cf. Chavannes, *ibid.*, p. 528, note; Rémusat, *Ville de Khotan*, p. 78.

alone could give safe access to Central Asia for trade and political expansion. The high mountains to the south for them possessed value only as a mighty natural rampart that gave flank protection for their great western highway, and the care with which I found all routes leading across this rampart guarded by watch-towers, 'chiusas', or military posts on passes and at suitable points of debouching valleys,[21] proves that this value is realized to the present day.

Winter grazing below north slopes of Nan-shan.

But without the ample vegetation which favourable climatic conditions assure to the Central Nan-shan, and without the advantages of equally abundant winter grazing by the side of the cultivable area, the territory, relatively limited in extent, could not have offered sufficient attractions to those nomadic nations to become, for some of them at least, a main seat of power during successive periods. Owing to a combination of geographical factors which it would take too long to set forth here in detail, the winter grazing just referred to is to be found in plenty along the lower courses of all the more important rivers that drain the northern slopes of, or pass through, the Richthofen Range. It exists, too, in many parts of the foot-hills, and, as my explorations of 1914 showed, in places even on the nearest plateaus of the desert hill chain which fringes the cultivable belt on the north, connecting the Ala-shan with the Pei-shan.

Historical struggles for 'passage land'.

It is only in the light of the geographical features I have endeavoured briefly to indicate that we can correctly understand what history tells us of the struggles which Wu-sun, Yüeh-chih, and Hsiung-nu carried on for the possession of this ground before the advent of Chinese power. They must be kept constantly in view also if we are adequately to appreciate the persevering efforts which alone enabled the Chinese successfully to open up this passage towards Central Asia and the West, and to clear it again after intervals of nomadic invasion.

Section IV.—FROM KAN-CHOU TO CHIN-T'A

Geographical advantages of Kan-chou.

At Kan-chou I had reached on August 27 the easternmost limit of my journey. Practical tasks kept me busy during most of my six days' stay there. Yet I was able to gain sufficient impressions of this large and still flourishing city to realize the importance it must always have claimed in the history of the Kan-su marches. Situated in the midst of an extensive fertile tract to which the large Kan-chou River, or Hui Ho, and two considerable tributaries on the west assure plentiful irrigation, Kan-chou also enjoys other advantages of a geographical nature. Though its elevation, about 5,100 feet above sea-level, is about the same as that of Su-chou, it has a distinctly more favourable climate, receiving more rain in the summer months and being less exposed to icy winds from the desert on the north during winter and spring. This latter advantage may partly be due to the protection afforded by the barren range which skirts the right bank of the Kan-chou River from its sharp bend to the north of the city, and which further east rises to heights well over 9,000 feet.[1] But more important even is the fact, already mentioned, that east of the line marked by the Kan-chou River's debouchure from the mountains there commences a submontane belt where cultivation over naturally fertile slopes can be carried on without need of irrigation.

Central position of Kan-chou.

The very position which the Kan-chou district occupies in relation to the rest of this 'passage land' along the north foot of the Nan-shan must have necessarily led to the creation within it of an important centre for administration and trade. Kan-chou lies just about half-way between Su-chou and Liang-chou, the two areas capable of supporting a larger population which terminate this 'passage land' on the west and east respectively. To the south-east Kan-chou is directly connected with Hsi-ning, that important Chinese frontier district towards Tibet, by a much-used route which crosses

[21] For such fortified positions and guard-stations in the Nan-shan, cf. *Desert Cathay*, ii. pp. 268 sq., 302, 304 sq., 331 sq.

[1] See Maps Nos. 93. D. 4; 94. D. 1.

the mountains over relatively easy passes to the valley of the Ta-tung River, a tributary of the Huang Ho. It constitutes the only line of communication across the Nan-shan ranges west of Liang-chou which could ever have been of any practical utility to the Chinese holding Kan-su. Finally it may be noted that, whereas both Su-chou and Liang-chou must always have been particularly exposed to trouble from nomad aggression owing to their accessibility by routes from the barbarian north,[2] Kan-chou is protected from any direct attack on that side by the rugged hill range previously mentioned and the extreme barrenness of the desert plains which extend beyond it.

Chang-yih of Han times.

There are no ancient remains above ground which would enable us to determine whether the present city occupies more or less the site where the *Chang-yih* 張掖 of Han times, corresponding to the later Kan-chou, was established. What indications on this point may be contained in Chinese historical records I am not in a position to ascertain. There seems, however, good reason for the belief that the city has not materially changed its position since mediaeval times. Marco Polo, who with his uncle Maffeo 'dwelt a whole year in this city when on a mission', describes *Campichu* as 'the capital and place of government of the whole province of Tangut'.[3] He particularly mentions the 'many minsters and abbeys' of the Idolaters. 'In these they have an enormous number of idols, both small and great, certain of the latter being a good ten paces in stature; some of them being of wood, others of clay, and others yet of stone. They are all highly polished, and then covered with gold. The great idols of which I speak lie at length.' Sir Henry Yule has already called attention to the fact that the colossal figures representing Buddha in Nirvāṇa, to which Marco Polo obviously refers, are also mentioned in the descriptions of Kan-chou given by Shāh Rukh's embassy and Ḥājī Muḥammad, the Persian trader, interviewed by Ramusio about 1550.[4] There can be little doubt that the colossal images meant in all three accounts are those still to be seen, of course with inevitable restorations, etc., in the great Buddhist temple of Kan-chou known as the Ta-fo-ssŭ.[5]

Idols mentioned by Marco Polo.

Ruined site of *Hei-shui-kuo*.

My return journey to Su-chou, as far as it lay along the high road, touched only at one point a site of some antiquarian interest. At a direct distance of about six miles to the north-west of the western main gate of Kan-chou, and just beyond the village lands of Yai-tzŭ, the road passes into a wide belt of waste ground, supporting but scanty scrub and partially covered with low dunes.[6] For more than three miles from north to south and for about two miles across there extends here an area showing effects of wind-erosion and covered with small débris of pottery, hard bricks, and the like, just in the manner of a Turkestān 'Tati'. The site is known by the name of *Hei-shui-kuo*, and had already been mentioned to me at An-hsi by my antiquarian friend Mr. Li[7] as a place from which antiques of different sorts are sometimes brought to collectors at Kan-chou. Along the eastern edge of the area the dunes lie heaped up to 25–30 feet in height, covering completely any remains that may survive on the ground. But beyond this belt of high drift-sand small erosion terraces from

[2] A reference, e.g., to the Russian Asiatic Trans-frontier Map XXII will help to make this point quite clear.

[3] Cf. Yule, *Marco Polo*, i. pp. 219 sq., where in note 1 the form of the name *Campiciu*, etc., in Marco's text has been fully accounted for.

[4] Cf. Yule-Cordier, *Cathay*, i. pp. 277, 294.

[5] The identification was first proposed by Palladius, *Journal N. China Br. R.A.S.*, 1875, x. p. 10; see Prof. Cordier's note, *Marco Polo*, i. p. 221. For the first European description of the Ta-fo-ssŭ temple I can trace, see Lóczy, *Kina*, p. 492.

According to a statement recorded by Palladius, the temple was built in 1103 by a Tangut Queen, who placed there the three idols 'which have since been found in the ground on this very spot'. The very cursory inspection I was able to make of the Ta-fo-ssŭ, as the shrine is locally known, suggested that these colossal stucco images, as well as the big structure which shelters them, must have undergone frequent and considerable renovations down to quite recent times, as was to be expected in view of the materials used and climatic and other local conditions.

[6] See Maps Nos. 93. c. 4; 94. c. 1.

[7] Cf. *Desert Cathay*, ii. p. 241.

1 to 3 feet in height crop out everywhere, and on their tops potsherds and fragments of brick lie thickest.

Walled enclosures at site.

The abundance of small pieces of porcelain left no doubt from the first that the date of the abandonment of this site was late, and closer examination of the surface remains that I could trace confirmed this. Besides a small fort with stamped clay walls about 60 yards square, not far from the eastern belt of high dunes and half-smothered by sand, I found about a mile to the south-west of the high road a walled enclosure some 300 yards square (Fig. 252), resembling in type those *ch'êng* within which most of the villages and small towns on this border seek shelter at the present day. The walls, about 8 feet thick at the top, still rise to a height of *circ.* 20 feet and bear at the north-east corner a massively built square tower. The drift-sand lying to a depth of about 11 feet under the shelter of the inner side of the east wall, just as observed at An-hsi, showed that the prevailing winds come from the east. Evidently the drift-sand is carried to this area from the bed of the Kan-chou River, here fully two miles wide.

Effects of wind-erosion.

At the same time the little extent of breaching observed on the face of the east wall proved that the erosive power of the winds was far from being as great on this ground as it is in the An-hsi region. Within the circumvallation numerous fragments of brick marked the foundations of houses, and the lines of roads crossing at right angles were still traceable. Evidently all structural remains had been destroyed by people from the neighbouring inhabited areas in search of building materials. Porcelain fragments were plentiful within the walled enclosure, most of the specimens taken here and elsewhere belonging to the Ming dynasty.[8] A third circumvallation visited near the northern edge of the 'Tati' area was of approximately the same size as the last, and had walls equally well preserved.

Finds of antiques.

Close to its west face a T'ang coin with the legend *K'ai-yüan* was picked up on wind-eroded ground. Taking into account Mr. Li's statement that metal objects of T'ang times have been found at Hei-shui-kuo, and the fact that among the decorated fragments of stoneware and porcelain I picked up there are some which Mr. Hobson ascribes to the Sung period,[9] I am led to conclude that the site was already occupied at that time, and probably earlier also, though its abandonment does not date back further than the close of the Ming dynasty. I may add in conclusion that many of the fragments of hard-burnt bricks found widely scattered over this extensive area looked as if they might have belonged not to buildings but to graves.

Line of Ming wall north of river.

A reconnaissance made across the richly cultivated ground to the north of Hei-shui-kuo enabled me to ascertain that across the river, along the narrow strip of arable ground left between its right bank and the foot of the barren hill range northward, there stretched a line of watch-towers evidently connected with the border line of Ming times. In 1914 I verified this assumption by tracing actual remains of the Ming wall on my descent along the right bank of the river. I may conveniently record here that the line of this later 'Great Wall', closely hugging the narrow strips of cultivation on that bank, was then traced to near the village of Hsiang-p'u (Map No. 91. D. 2), whence it evidently was continued across the river westwards.

High road past Kao-t'ai to Su-chou.

At Kao-t'ai, a place of some antiquity and local importance,[10] the high road passes the point where the belt of cultivable ground, between the here utterly barren glacis of the Nan-shan and the desert hill range across the Kan-chou River, is reduced to its minimum width, less than five miles in all.[11] One march further, at Hua-chuan-tzŭ (Map No. 91. D. 2), the high road leaves cultivation behind

[8] Cf. the Descriptive List at the close of this section, with Mr. Hobson's analysis of the ceramic fragments.

[9] See Kan-chou. 001–5, 007, 009 in Descriptive List below.

[10] See Map No. 93. A. 3. Kao-t'ai is duly mentioned as *Gauta* in Ḥājī Muḥammad's remarkably accurate list of caravan stages from Kan-chou right through to Kāshgar, Samarkand, and beyond; cf. Yule-Cordier, *Cathay*, i. p. 293.

[11] The map (No. 93. A. 3) needs a slight correction here. The river approaches Kao-t'ai within a mile or so, and the village land of Li-po, on the opposite bank, is less than a mile wide.

altogether and, passing a bare gravel plateau between the Kan-chou River and the marshy depression of the Po-nan Ho, enters a wide belt of scrub and reed-covered steppe, which extends for about 40 miles in a direct line from east to west (Map No. 91. A–C. 2). In former times this big area, though covered by drift-sand in parts, must have had considerable value, as it is ground well fitted for winter grazing.[12] The watch-towers, and in places the wall, too, of the Ming border line were clearly seen from the high road, skirting the foot of the low flat hill range northward. It was interesting, as I passed along this ancient highway in the early days of September, to meet successive caravans of camels and donkeys carrying goods right through from Khotan to Kan-chou and Lan-chou, just as they had in the days of Marco Polo and long before him.

Ming wall crossed to Chin-t'a.

From the roadside station of Shuang-ching-tzŭ I struck off to the north-west for the sake of a reconnaissance beyond Chin-t'a 金塔. Its object was to ascertain whether the line of the ancient Han Limes, which, I suspected, might have lain to the north of Chia-yü kuan and well beyond the still known mediaeval border wall, could be traced in that direction. The attempt failed owing to the very limited time I was able to spare for it, only a few days, and the often proved difficulty of extracting any helpful local guidance from the ever secretive dwellers on these Kan-su borders. But it yielded some useful observations all the same. On my way to Chin-t'a I crossed the line of the Ming wall (Map No. 91. A. 1) and assured myself that its construction, as well as that of its watch-towers, agreed here closely with what I had noted at the line to the north-east of Chia-yü kuan and north of Su-chou.[13] The advanced watch-towers on the top of the low hill chain skirted by the wall were clearly meant to form part of this defensive system. The oasis of Chin-t'a, watered by canals from the Pei-ta Ho, or Su-chou River, had prudently been left outside this 'Great Wall' of a period of cautious seclusion. But evidently its inhabitants had tried to obtain safety from raids, etc., by similar means; for I found a much-decayed clay wall running round the southern and south-eastern edges of the cultivated area.

Abandoned cultivation beyond Chin-t'a.

The ground beyond Chin-t'a, a picturesque little town with some five hundred homesteads, exhibited in a very instructive fashion physical features typical of terminal oases in the Tārīm Basin. Strips of cultivation following the canal lines gradually gave way, as the map (No. 90. A. 4) shows, to patches of fields scattered amidst extensive wastes of scrub or tamarisk jungle. Some fields were still tilled, others seemed to have been abandoned for a long time. In a few places I came upon small clearings, evidently attempts at recent reclamation. At T'ou-tun (Map No. 90. A. 3), one of these outlying small cultivated areas, there were the usual complaints about inadequate water-supply for irrigation and an increasing frequency of dry seasons. Yet there could be no doubt that most of the land now lying waste had been abandoned in consequence of the terrible devastations accompanying the Tungan rebellion. Without very careful and prolonged study of local conditions it seemed impossible to decide whether and to what extent the present half-deserted aspect of this northern portion of the Chin-t'a oasis was due to desiccation or to the depopulation which resulted from the Tungan inroads. The Niya or Endere Sites may well have presented a similar appearance some time before their final abandonment—and, perhaps, the same difficulty for a passing traveller to judge of the *direct* cause of it. The ruins at Hsi-yo, which I had found marked on the Russian map and which I visited on September 11 from T'ou-tun, proved to be those of a shrine of no great age, destroyed by the Tungans. The river-bed close by, though fully a mile wide, was completely dry at the time; yet cultivation had been started afresh some years earlier at an isolated farm near the ruins. I little guessed, when turning back from this point, that the line of the ancient Han Limes led past it at a distance of only three miles, and could be traced thence practically

Desiccation or depopulation?

[12] It is still used for this purpose in places by the Sarö Yögur tribe; see above, p. 1129, and Mannerheim, *Visit to the Sarö and Shera Yögurs*, pp. 4 sqq.

[13] See above, pp. 1120 sqq.

unbroken along the Su-chou River as far as the oasis of Mao-mei! So this discovery was left over for my explorations of 1914.

OBJECTS FOUND AT HEI-SHUI-KUO

Kan-chou. 001. Fr. of greyish-buff stoneware with coating of white slip through which orn. (one straight and one curved line) is cut into buff body; transparent glaze of yellowish tint. Chinese; perhaps Po-shan ware. Sung dynasty. Gr. M. 1¼".

Kan-chou. 002–3. Frs. of porcelain with pale celadon green glaze on each side. Incised lines in body of 002. Chinese; Sung (?) dynasty. Gr. M. 1⅝".

Kan-chou. 004. Fr. of buff stoneware, with traces of creamy white slip inside, but rest worn bare. Chinese; prob. Sung dynasty. Ting type. Gr. M. 1⅞".

Kan-chou. 005. Fr. of buff stoneware with creamy glaze. Chinese; prob. Sung dynasty. Gr. M. 1¼".

Kan-chou. 006. Fr. of white porcelain from rim of bowl. Chinese; not older than Ming dynasty. Gr. M. 1½".

Kan-chou. 007. Fr. of buff stoneware with white slip and glaze on one side, much worn; other side deeply pitted and glazed with brown. Chinese; prob. Tz'ŭ-chou ware, Sung dynasty. Gr. M. 2$\frac{3}{16}$".

Kan-chou. 008. Fr. of buff stoneware; exterior lightly ribbed, coated with dull black glaze inside and out. Chinese. Gr. M. 1⅝".

Kan-chou. 009. Fr. of stoneware bowl, rim; grey porcelainous body with much-worn greenish-black glaze. Chinese; prob. Sung dynasty. Gr. M. 1⅝".

Kan-chou. 0010. Fr. of stoneware; grey body with black glaze; disfigured by fire. Chinese. Gr. M. 1".

Kan-chou. 0011. Fr. of pottery from rim of vessel; coarse brown clay, sand worn. Length 2".

Kan-chou. 0012. Iron hook. Gr. M. ¾".

Kan-chou. 0013. *a–k*. **Ten frs. of porcelain** painted in underglaze blue. *a* (broken) and *b* rough floral pattern; *c* two blue lines only; *d* fr. of rim, floral orn.; *e* fr. of rim, hatched border; *f* fr. of rim, indistinct pattern of curled scrolls under thick bubbly glaze; *g* (broken) thin floral design; *h* fr. of everted rim, floral design, part of rivet hole showing in edge of fracture; *i* fr. of slightly everted rim, indeterminate design of scrolls, etc., rivet hole; *k* fr. of slightly everted rim, hatched borders inside and out. Chinese: *a–d* and *g–i*, Ming dynasty; *e–f* and *k*, prob. Ming. Gr. M. 2¼".

Kan-chou. 0014. Fr. of white porcelainous ware with creamy glaze. Chinese; Ting ware; Sung dynasty. Gr. M. 2".

Kan-chou. 0015. Fr. of porcelain with pale greenish-white glaze; painted in underglaze blue with scroll-work. Chinese; prob. Ming dynasty. Gr. M. 1".

Kan-chou. 0016. Fr. of porcelain from bottom of bowl; painted in underglaze blue, medallion with flowers; glaze much worn. Chinese; prob. Ming dynasty. Gr. M. 2⅛".

Kan-chou. 0017. Fr. of porcelain from rim of bowl; painted in underglaze blue; floral orn. Chinese; prob. Ming dynasty. Gr. M. 1¼".

Kan-chou. 0018. Fr. of porcelain; painted in blue under thick bubbly glaze, a cloud scroll. Chinese; Ming dynasty. Gr. M. 1⅛".

Kan-chou. 0019. Fr. of pale buff stoneware; cream-white glaze outside painted in brown with floral pattern; brown glaze inside. Chinese; prob. Tz'ŭ-chou ware. Sung dynasty. Gr. M. 1½".

Kan-chou. 0020. Fr. of porcelain from rim of bowl; thin, painted in underglaze blue, border of concentric bands. Chinese; prob. Ming dynasty. Gr. M. 1".

Kan-chou. 0021. Fr. of porcelain bowl; greyish-white body with thick grey-green celadon glaze on either side; rivet hole. Chinese; prob. Ming dynasty. Gr. M. 1½".

Kan-chou. 0022. Fr. of porcelain from bottom of bowl; painted in underglaze blue, medallion of flowers and concentric rings. Chinese; Ming dynasty. Gr. M. 2¼".

Kan-chou. 0023. Fr. of porcelain from bottom of bowl; painted in underglaze blue with gadrooned border and dragon (?) design; medallion of flowers inside. Chinese; prob. Ming dynasty. Gr. M. 2".

Kan-chou. 0024. Fr. of porcelain from bottom of bowl; painted in underglaze blue with scroll design inside, floral pattern and border of stiff leaves outside; rivet holes. Chinese; Ming dynasty. Gr. M. 2". Pl. IV.

Kan-chou. 0025. Fr. of porcelain from slightly everted rim of bowl; painted in underglaze blue with rough floral design. Chinese; Ming dynasty. Gr. M. 1¼".

Kan-chou. 0026. Fr. of porcelain from bottom of bowl with slightly convex base; painted in underglaze blue with floral medallion orn. and concentric rings inside; below, in double ring, two characters (*wan fu*, 'myriad happiness') and part of a third. Chinese; Ming dynasty. Gr. M. 2". Pl. IV.

Kan-chou. 0027. Fr. of porcelain from bottom of dish; painted in indigo blue under a greyish-white glaze with formal floral (?) design enclosed by concentric rings; rivet holes. Chinese; Ming dynasty. Gr. M. 2¾".

Kan-chou. 0028. Fr. of porcelain painted in underglaze blue with floral scroll-work. Chinese; Ming dynasty. Gr. M. 1½".

Section V.—THE HAN LIMES FROM YÜ-MÊN-HSIEN TO AN-HSI

High road from Su-chou to Yü-mên-hsien.

The high road by which I moved on to Yü-mên-hsien after regaining Su-chou undoubtedly follows what must have always been the main line of communication for the Chinese towards Tun-huang and the Western regions. But there are no ancient remains above ground to mark it. Nor can the small areas of cultivation which are to be found, as Maps Nos. 85, 86 show, near some of the roadside stations between Chia-yü kuan and Yü-mên-hsien ever have been of any importance considering the scanty surface drainage from the mountains which traverses this plateau belt. The rugged and barren range, which we have already had occasion to notice to the north-west of Chia-yü kuan, continues with the same bearing along the great route and must have served as an effective flank protection for it on the north; for along the greatest part of its length it is quite impracticable except on foot, and the two narrow gorges in which the Po-yang Ho and the stream of Ch'ih-chin break through it are easily guarded. It was the strength of this natural barrier which first led me erroneously to conjecture that it had been utilized for the line of the Han Limes. In reality this line had been drawn through the chain of depressions which lie to the north of the range. Want of time and of suitable transport did not allow me to visit them until 1914, and thus it was only then that I was able to trace the Han Limes right through from the Su-lo Ho to below the junction of the Su-chou and Kan-chou Rivers.

Han *Limes* line further north.

Reconnaissance to *Shih-êrh-tun*.

Nevertheless it was on this return journey to An-hsi that I succeeded in correctly locating the starting-point of the section of the Han Limes just referred to. On moving to Yü-mên-hsien on September 20, across the absolutely bare gravel plateau which forms the watershed between the Su-lo Ho and the drainage of Ch'ih-chin, I noticed far away to the north a string of hamlets at the foot of the low Pei-shan hills.[1] As the route map of M. Obrucheff's journey of 1894 seemed to indicate ruined watch-towers in the neighbourhood of that ground, and as the very names of the hamlets *Shih-tun*, 'Tower X', and *Shih-êrh-tun*, 'Tower XII', were obviously derived from those towers, I made on the following day a long reconnaissance from Yü-mên-hsien northward in order to visit them. It brought me after a ride of more than 16 miles across a reed-covered basin, periodically inundated by canals and overflow waters from the Su-lo Ho, to the hamlet of Shih-êrh-tun.

Bifurcation of Su-lo Ho drainage.

I can refer only in passing to the geographically very curious fact that the small stream which accounts for the existence of this hamlet and those lying along its line further on is undoubtedly fed from the Su-lo Ho; but its easterly course is directly opposite to that followed by the Su-lo Ho itself from the adjacent point of its great bend, as can be seen from the map. We have here a clear instance of bifurcation far away from the terminal delta of the river with which we have become familiar more than 200 miles further west.[2] Regarding the interesting archaeological discovery, too, which rewarded this reconnaissance, it must suffice here to state the main facts; for

[1] See Map No. 85. A, B. 2.

[2] My explorations of 1914 enabled me to follow this stream, locally known as Hsi-wan Ho, on its course to the east where it falls into the drainage area of the Ch'ih-chin River. This itself apparently links up with the marshy basin beyond the oasis of Hu-hai-tzu or Ying-p'an. Thus water derived from the Su-lo Ho finds its way eastwards into a terminal basin hundreds of miles removed from that where the river now ends on its course along the depression leading towards the ancient Lop Lake basin. The essential facts of this remarkable bifurcation will be illustrated in the new atlas comprising the surveys of all my three expeditions. Exact details about the hydrography of this interesting desert depression could, of course, be expected only from a more elaborate survey including careful levelling operations.

The existence of the Hsi-wan Ho, with the small marshes along it and the inundation areas near its head, may be held to explain the indication of a large lake or marsh near the Su-lo Ho bend which is to be found in Chinese maps and has been borrowed from them by European cartographers also. Cf. regarding this somewhat problematic feature, Futterer, *Geographische Skizze der Wüste Gobi*, in *Petermann's Mittheilungen*, Ergänzungsheft No. 139, p. 24; also Sheet A. 1 of the maps illustrating Count Széchenyi's expedition (1877-80); *Tibet* map of R. Geographical Society (1900), etc.

the relation of the Han Limes remains discovered near Shih-êrh-tun to the rest of the ancient border-line, both to the east and the west of this point, was fully cleared up only by the surveys of 1914, and must be left for discussion elsewhere.

Watch-towers of Han *Limes*.

Close above the left bank of the stream where it irrigates the fields of Shih-êrh-tun there rises the outermost of a succession of narrow low ridges covered with fragments of decomposed rock, as seen in many places along and within the utterly barren Pei-shan ranges. It is crowned by a line of watch-towers, some badly decayed, some repaired, but all showing an ancient core. The eastern-most of those found above Shih-êrh-tun had been refaced with rough brickwork, hiding in most places the ancient layers of stamped clay. But a small fort below it, at the foot of the ridge, looked decidedly ancient. Its remarkably massive construction with solid clay walls 10 feet thick, enclosing a space 52 by 42 feet within, distinctly recalled the small fort at the ancient Yü-mên, T. XIV; significantly enough it bore the same local designation of *Hsiao fang-p'an*.[3] On following the ridge to the west for about half a mile I came upon a second tower, badly decayed but furnishing conclusive proof of its antiquity. The familiar reed layers of the Han Limes separated its strata of stamped clay at intervals of 12–14 inches. It was about 19–20 feet square at the base, just like so many of the ancient watch-towers I had examined on the Tun-huang Limes, but was broken at a height of about 14 feet. A third tower found over a mile further west crowning the same ridge had suffered even more, rising only to 8 feet or so, and even this remnant fissured by wind-erosion. But here, too, the thin layers of reeds dividing the strata of stamped clay were distinguishable in perfect clearness.

Remains of ancient Limes *agger*.

It was first at this tower that I noticed the slopes of the ridge, only 15–25 feet wide at the top, and about 30 feet above the adjoining ground, to be thickly strewn with half-petrified twigs of tamarisks and wild poplars. Their abundance on this ridge, where trees could never have grown, at once suggested use in a rampart constructed in the fashion of the Limes wall north and west of Tun-huang. Closer search soon revealed, about 40 yards west of this tower, a portion of the rampart or *agger* still *in situ* on the top of the ridge. The twigs and branches were embedded between layers of detritus, used in the same way as the clayey gravel had been along the Limes line beyond Tun-huang. Owing to the coarseness of the material here available, the *agger* had been built with greater thickness at its base, the foundation layers *in situ* measuring about 15 feet across. Its remains could be traced with more or less clearness for a distance of about 300 yards along the detritus-covered ridge before it finally sinks away to the level of the salt-encrusted plain at its foot. Here the line of the wall completely disappears on ground manifestly liable to be flooded at times either from the Su-lo Ho or by such drainage as may at rare intervals descend from the gravel plateaus to the north that mark the edge of the Pei-shan.

Eastward continuation of Limes.

Some three miles away to the north-west a conspicuous tower rises at the foot of the nearest plateau, and towards this, as I found later, the line of the wall continued. But its further exploration became possible only in 1914, when I revisited this ground after having traced the Limes right through from the direction of An-hsi. On the same occasion I was able to follow up its line from Shih-êrh-tun eastwards to the little oasis of Hu-hai-tzŭ, also known by the significant name of *Ying-p'an* 營盤 (military encampment), and thence across a great sandy waste to the lower course of the Su-chou River near Mao-mei.[4] The description of the line thus followed by the Han Limes and the discussion of the reasons which are likely to account for its choice must be left for a future publication. Here it will suffice to point out that the section of the Limes line stretching between

[3] The name 小防盤 means literally 'small protective camp'; cf. above, p. 683, note 2 a.

The fort symbol in Map No. 85. A. 2 near Shih-êrh-tun has been erroneously placed south instead of north of the Hsi-wan Ho stream. It ought also to have been printed in red.

[4] Cf. *Third Journey of Exploration*, *Geogr. Journal*, xlviii. p. 195.

Shih-êrh-tun and Hu-hai-tzŭ runs more or less parallel to a route still occasionally followed to the present day by Mongols and others who wish to proceed to Hāmi by a direct track crossing the Pei-shan east of the An-hsi–Hāmi high road.[5] For those who follow this track from the side of Hāmi, Shih-êrh-tun is the first inhabited place reached on the Kan-su borders. Hence it is likely to have already had its own 'Gate' station in ancient times. But whether this fact had anything to do with the later transference of the name *Yü-mên* to the district headquarters now located at Yü-mên-hsien remains doubtful.

Road from San-tao-kou to Bulungir.

From Shih-êrh-tun I regained the present highway at the village of San-tao-kou to the north-west of Yü-mên-hsien (Map No. 83. D. 3). The march which thence took me on September 22 to Bulungir led over ground abundantly watered from branching beds of the Su-lo Ho, as well as by marshy springs gathering at the foot of the gravel glacis further west. Extensive areas of abandoned cultivation now overrun by scrubby jungle, as far as Ch'i-tao-kou ('the seventh canal'), attest the ravages here produced by the great Tungan rebellion. Beyond this there spreads a wide grassy steppe traversed by marshy depressions and affording fine grazing, which in times gone by must have had its attractions for nomadic invaders. From the high ground to which the road keeps here I sighted far away to the north a line of ruined towers, extending along the right bank of the deep-cut Su-lo Ho bed. In view of the definite proof gained at Shih-êrh-tun there could be little doubt that they marked the line of the Han Limes. The necessity forced upon me by various practical reasons of quickly gaining An-hsi prevented my examining these ruined posts at the time and searching for remains of the Limes wall. But subsequently, when Surveyor Rai Rām Singh had been relieved by R. B. Lāl Singh at An-hsi, I was able to send back the latter for a rapid reconnaissance. This rendered it possible to indicate in Map No. 83. B, C. 2 the position of the least decayed of the towers. The careful survey I effected myself in 1914 along the whole line right through to Shih-êrh-tun has supplemented the evidence thus gained in various ways. But it has shown also that, owing to excessive wind-erosion in some places and the effect of moisture in others, the traces surviving of the Limes *agger* are very scanty indeed until its line passes on to firm gravel soil west of the abandoned station of Ch'iao-wan-ch'êng (Map No. 83. D. 2).[6]

Limes line along north bank of Su-lo Ho.

Fortified station of *Bulungir*.

The massive walls of Bulungir, enclosing an area about 1,100 yards square, appear to have sheltered during the seventeenth–eighteenth centuries an important Chinese garrison. The place, now almost deserted, had evidently served as an advanced base for the operations by which the Chinese, under the great Manchu Emperors K'ang-hsi and Ch'ien-lung, pushed back the threatening power of the Dzungars and finally conquered the 'New Dominion'.[7] A strong garrison holding

[5] For a detailed account and carefully executed map of this direct route from Su-chou to Hāmi, see Futterer, *Geographische Skizze der Wüste Gobi, loc. cit.*, pp. 3 sqq. Prof. Futterer duly noticed the ruined fort of Shih-êrh-tun on his way from the Su-lo Ho to Hu-hai-tzŭ (cf. p. 25), without, however, becoming aware of its significance or of the remains of the ancient Limes line.

The continued use of the route from Hu-hai-tzŭ to Shih-êrh-tun probably explains the notice taken of the ancient watch-towers along it in calling the hamlets at its western end after 'Tower X', 'Tower XII'. It also accounts for the repairs effected to those towers which are close to the route. The popular explanation I heard was that Shih-êrh-tun was 'twelve towers', i. e. 120 li, distant from Hu-hai-tzŭ, a watch-tower, or rather a much-reduced representation of one, being the usual road-mark on modern Chinese highways placed at every 10 li or what is conventionally taken for that distance. In Chinese Turkestān 120 li would at the present day approximately correspond to 24 miles. The actual distance between Shih-êrh-tun and Hu-hai-tzŭ is well over 40 miles.

[6] The representation of the Limes north of the river as an unbroken line from *circ.* 96° 25' to 96° 40' long. is an error, due to R. B. Lāl Singh, then new to such work, having in places mistaken low Yārdang ridges for remains of the wall. But the line of the latter could in 1914 be fixed with certainty all the same by the ancient pottery débris, etc., that marks the position of numerous intermediary towers now completely decayed.

Ch'iao-wan-ch'êng proved to be a well-built small fortress erected under the Emperor Ch'ien-lung and destroyed during the Tungan rebellion.

[7] Cf. Ritter, *Asien*, ii. 371 sq. The name, also pronounced *Bulunjir*, or *Pu-lung-chi* by Chinese, is assumed to be of Mongol origin.

Bulungir was certainly well placed for watching the several routes through the Pei-shan by which a nomadic enemy could make his way from Hāmi to the Su-lo Ho and the Kan-su marches. It could also conveniently guard the narrow defile through which the river and the high road along it pass some twelve miles west of Bulungir (Map No. 83. B. 2).

Defile of Wan-shan-tzŭ.

The low but steep and rugged spur of Wan-shan-tzŭ,[8] a north-eastern continuation of the hill range we have passed north of Ch'iao-tzŭ, there juts out towards the 'thalweg' of the river, and is closely approached on the opposite side by a small and almost isolated ridge representing a last offshoot from the southernmost Pei-shan range. The river passes between the two in a winding defile scarcely half a mile wide at its bottom. As the end of the Wan-shan-tzŭ spur falls off precipitously to the river, which actually washes its foot, the road must necessarily ascend the terminal ridge, leading over it at a height of about 200 feet above the river bed. It is this point, particularly easy to watch and defend, that the engineers of the ancient Limes, with their unfailing eye for the military advantages of the ground, had chosen for bringing their border-line from the right to the left bank. The tower shown in the map as crowning the top of the ridge facing Wan-shan-tzŭ from the north proved on its examination in 1914 undoubtedly to date from Han times. The clearing of the débris at its foot then yielded one or two Chinese documents on wood of that period. The wall itself, here built mainly of rough stones, was clearly traceable along the southern and south-eastern foot of the same ridge. On the low ground further west, where it must have run down to the river bank, its traces had, of course, disappeared.

Towers and shrines at Wan-shan-tzŭ.

On the southern bank of the river and along the north-west end of the Wan-shan-tzŭ spur I was unable to discover any clearly recognizable remains of the Limes line. But that end of the spur bears two large watch-towers close to the road, and beside the western one remains of four small structures of brick, which appear to have been shrines. I may add that by the left bank of the river, where it is first approached on the east by the foot of the Wan-shan-tzŭ spur, there are the ruins of a well-built temple with several Stūpas, all destroyed during the Tungan rebellion and known as Lao-chün-miao. I have had before occasion to suggest that the defile at the foot of the Wan-shan-tzŭ spur might well have served for a 'Gate' station of the Han Limes before its line had been extended to Tun-huang and beyond.[9] If that had ever been the case, we might, perhaps, in view of what has been previously explained, recognize in these shrines a lingering trace of the local worship which appears to cling invariably to such 'Gate' sites.

Limes wall traced beyond Hsiao-wan.

Of the wall which must have continued the Limes line on the left bank of the river beyond Wan-shan-tzŭ I failed to trace any remains until after passing the village area of Hsiao-wan (Map No. 83. A. 2). The low-lying ground here between the river and the foot of the hill range south is covered with scrub and jungle, where not actually cultivated, and on ground of this kind remains of the ancient *agger* could scarcely be expected to survive. Some five miles below the main village of Hsiao-wan, where the road emerges from the area of jungle and abandoned cultivation to more open ground, I came upon the ruins of a walled enclosure, about 208 yards square, known as *P'o-ch'êng-tzŭ*, 'the old town'. Its walls still rise to 10–12 feet in height and do not bear a very ancient look. Crossing beyond it the canal which carries water to the southernmost portion of Kua-chou cultivation, I was now approaching the stretch of bare ground where on my way to Ch'iao-tzŭ three months earlier I had sighted two towers of the Limes and the line of wall connecting them.[10] About a mile to the west of P'o-ch'êng-tzŭ I found a much-decayed mound of clay (marked by *a* on map), about 12 feet high and 10 feet in diameter, which, as it falls exactly into line

[8] This appears to be the correct form of the name as recorded by Chiang-Ssŭ-yeh. *Wan-shan-tzŭ* 灣山子, 'the winding hill [range]', seems a very appropriate designation, looking at the curving shape of the spur shown by the map.

[9] Cf. above, pp. 727, 1099, note 20.

[10] See above, p. 1099.

with the two previously noticed towers β and γ (see Map No. 83. A. 3), could be safely recognized as marking the position of a Limes tower. The layers of stamped clay were still distinguishable.

Remains of Limes watch-towers.

The adjoining ground, being bare clay and eroded into small Yārdangs 3–4 feet high, showed no trace of the wall. But moving towards the tower β, now in sight, I picked up, after less than a mile, the line of the *agger* represented by a perfectly straight mound that rises about 2–3 feet above the bare gravel-covered soil. Its appearance was just the same as along the Limes stretch discovered to the south-west of An-hsi. For over a mile the line could be followed with short breaks at intervals to the tower β. This proved to be built of layers of stamped clay and to rise still to 13 feet or so in height. It measured about 12 feet in diameter, having lost its original square shape through erosion. Around it a low circular mound, about 28 yards in diameter, marked an enclosure such as I had found, e.g., at T. IX. a on the Limes west of Tun-huang.[11] Fragments of grey mat-marked pottery of Han type could be picked up near the tower. Beyond it the mound, which marks the line of the wall, could be sighted running straight towards the tower γ, less than two miles away to the south-west. The preservation of these clear traces of the Limes wall was manifestly due to the ground here being a hard gravel 'Sai', neither bare loess or clay liable to wind-erosion nor soil reached by moisture and affected by vegetation. Further on the ground merged into the low-lying scrubby plain stretching around An-hsi, where the wall was bound to decay completely. But a fourth mound continuing the line could still be sighted in the distance.

[11] See above, p. 662.

CHAPTER XXVIII

TO HĀMI AND TURFĀN

SECTION I.—FROM AN-HSI TO HĀMI; HSÜAN-TSANG'S DESERT CROSSING

Second stay at An-hsi.

AT An-hsi I was kept busy for twelve days by manifold exigent tasks which have been recorded in my Personal Narrative.[1] Here it will suffice to mention that, besides the preparation of a full report to Government on my previous operations, of proposals, accounts, etc., they included arrangements for the return via Khotan of Surveyor Rai Rām Singh, now invalided to India, and the secret acquisition, successfully managed through Chiang Ssŭ-yeh, of extensive further 'selections' of manuscripts from Ch'ien-fo-tung. As soon as my collection of antiques had received this precious addition of four camel-loads of texts from the hidden temple library, I set out with R. B. Lāl Singh for the journey which was intended to take us along the foot of the T'ien-shan to Hāmi, Turfān, and Kara-shahr, and then for another winter campaign into the desert of the Taklamakān.

High road from An-hsi to Hāmi.

Regard for economy of time, and also for the safe transport of our heavy loads of antiques, obliged me to follow to Hāmi the present Chinese high road where it crosses the stony desert of the Pei-shan in eleven weary marches aggregating a total distance of about 218 miles. It has been followed too often by European travellers to need any detailed description here. For the traveller who is not a geologist there is little to observe in this great waste of gravel and crumbling rock. The much-decayed ranges of hills, through which the route passes in succession and which alone break its monotony, rise nowhere much above 7,000 feet, and the wide detritus-filled valleys or plateaus between them lie rarely more than a few hundred feet below the saddles crossed. But there are certain aspects of this true 'Gobi' which have their interest for the student of ancient geography, and which in view of the historical importance of the route deserve to be noted here.

Importance of 'northern route' after A.D. 73.

As we moved along from one wretched little roadside station to another, each established with its mud hovels, tiny post of soldiers, and big heaps of refuse at points where some shallow depression offers a scanty supply of water in well or spring, and occasionally patches of equally scanty grazing on scrub or reeds, I was able to observe conditions of traffic which certainly could have changed but little since ancient times. Ever since the Chinese in A. D. 73 first acquired a firm foothold at Hāmi,[2] this 'northern route', with the few alternative tracks practicable on the west from Tun-huang, on the east from the side of Su-chou and the Su-lo Ho bend, had formed an important, if not the principal, line of communication to the territories on both sides of the T'ien-shan and to the Tārīm Basin. Whenever Chinese power could assert itself in those regions and protect them against barbarian inroads from the north, this route must have seen heavy traffic carried on much in the same way as it now is. All information available from Chinese records and later Western sources points to the conclusion that, ever since the more direct route from Tun-huang to Lou-lan and the northern oases of the Tārīm Basin was finally abandoned in the fourth century, this 'northern road'

[1] Cf. *Desert Cathay*, ii. pp. 338 sqq.

[2] Cf. Chavannes, *Les pays d'occident après le Heou Han Chou*, *T'oung-pao*, 1907, p. 156.

via Hāmi must have become practically what it is still now, the main channel for trade and military movements alike between China and Central Asia.

Scarcity of fodder, fuel, and water.

Whether on the main road from An-hsi to Hāmi or on any of the previously mentioned tracks leading more or less parallel to it and over ground closely corresponding in character,[3] the movements of troops and of convoys for them must at all times have been seriously hampered by the difficulties about securing a sufficiency of reed straw, and in places even of water, for a large number of animals. To these must be added the equally great dearth of fuel, a trouble which the bitterly cold winter climate of the Pei-shan plateaus and the prevalence of icy north-east winds in the spring must always make particularly felt. It was thus easy for me, from what I observed on this journey and from the accounts of living witnesses, to appreciate the efforts which it had cost the Chinese, operating from the Kan-su marches recovered after the great Tungan rebellion, to assemble at Hāmi the relatively large force which overawed and quickly extinguished the Muhammadan dominion set up by Yāqūb Bēg in Chinese Turkestān.

Operations through Pei-shan difficult.

The difficulties which had to be overcome in the course of similar operations during Han and T'ang times are bound to have been equally serious. Even if we assume that desiccation may to some extent have affected the supply of water, grazing, and fuel available in this central portion of the Pei-shan since those times, there is plenty to show that it was then too a 'Gobi', not without reason dreaded by the Chinese. It must also be remembered that the enemies against whom the Chinese had to contend, when opening up and securing this vital line of communication on those early conquests, were far more formidable, not merely in military strength but also by the fact of their being nomads. Accustomed by their wanderings to cross barren tracts and with mounts trained to face privations and big distances, Huns, Turks, or Mongols could not have experienced anything like the same difficulties as the Chinese in operating across a desert which even now possesses occasional wells and springs and scattered patches of grazing. The experience gained on this journey and the still more instructive experience furnished in 1914 by the exploration of hitherto unsurveyed routes from the Su-chou River to the north-east of Hāmi have enabled me to realize better how in ancient times parties of raiding Huns could push south from the T'ien-shan for attacks on the Tun-huang Limes, before the desert of the western Pei-shan became wholly impassable through desiccation. With men and animals hardened by nomadic existence and with local knowledge secured long beforehand, large bands of raiders from the north might even at the present day be able to penetrate rapidly through the great natural barrier interposed by the central and eastern Pei-shan.

Hsüan-tsang's desert journey to Hāmi.

To the Chinese, with their strongly fixed notions of civilized existence, this desert crossing must have at all times presented a distinctly deterrent aspect, whether they had to face it as soldiers, traders, or casual travellers. This fact is brought home to us in a very striking fashion by the interesting account which the *Life* of Hsüan-tsang has preserved of the great pilgrim's adventurous journey through the desert from Kua-chou to I-wu, or Hāmi. The questions concerning its starting-point and the position which the *Yü-mên kuan* station occupied at the time have already been fully discussed above.[4] I have shown there, I believe, that Hsüan-tsang set out for his desert crossing [4a]

[3] For a very thorough description of the ground traversed by one of these eastern tracks, see Futterer, *Geographische Skizze der Wüste Gobi*, *Petermann's Mittheilungen*, Ergänzungsheft, No. 139, pp. 3 sqq., and for a graphic account of the conditions of travel along it, *ibid.*, pp. 30 sq.

[4] See above, pp. 1097 sqq.

[4a] According to Julien, *Vie*, p. 14, note 1, Hsüan-tsang appears to have left the capital in the eighth month of the third year of *Chêng-kuan*, corresponding approximately to September, A.D. 629. Allowing at least two months of travel, including brief halts, for the journey from Hsi-an-fu to Kua-chou, and taking into account the recorded stays of one month each at Liang-chou and Kua-chou, the start from Kua-chou for Hāmi would fall in the early winter months of A.D. 630. But the absence of any reference to sufferings from cold, and the incident when the pilgrim lost the contents

from a place on the Su-lo Ho which must have been in the vicinity of the present An-hsi and probably not far from the point where the high road of our times passes the river. Considering that this road, except for a small detour between Ta-ch'üan and Sha-ch'üan-tzŭ due to necessities of water-supply, leads in what practically is a straight line from An-hsi, or Kua-chou, to the Hāmi oasis, it seems safe to assume that the ancient route which the pilgrim intended to follow—the story, as recorded in the *Life*, clearly shows that after the first four marches he strayed from it—could not have lain far away from the present route line.

Topographical features on An-hsi-Hāmi route.

But before we attempt to follow the traces of the pious traveller on his adventurous journey, which threatened nearly to end with his dying of thirst in the desert, it will be well to indicate briefly certain main topographical facts concerning the ground traversed by the present high road. As the Maps Nos. 80, 81 show, the first five marches from An-hsi lead across a succession of narrow hill ranges, all striking approximately east to west and rising but little above the wide plateau-like valleys between them. The halting-places offering water are all situated close to the foot of these ranges. The subsoil drainage comes to light in springs at the first three stages (Pei-tan-tzŭ, Hung-liu-yüan, Ta-ch'üan) and is easily reached by wells not more than 6–8 feet deep at Ma-lien-ching-tzŭ and Hsing-hsing-hsia. The water is fresh at all these stages, and some scanty grazing obtainable. It is probably not without reason that the boundary between the provinces of Kan-su and Hsin-chiang is fixed now close to Hsing-hsing-hsia;[5] for beyond the character of the ground changes, distinctly for the worse. Much bare rocky ledge and detritus is passed on the next two marches to Sha-ch'üan-tzŭ and K'u-shui, there being a steady descent of some two thousand feet from the average level of the preceding stages. Vegetation becomes increasingly scanty and the water decidedly brackish, as the name of *K'u-shui*, 'Bitter Water', rightly indicates.

Trying marches beyond *K'u-shui*.

But it is the next march, that to Yen-tun (Map No. 76. A. 4), which is most dreaded of all by Chinese wayfarers. For a distance of some 35 miles it leads down over absolutely bare gravel slopes into a depression lying at its bottom some 1,500 feet below the level of K'u-shui. Totally devoid of water or shelter of any sort, this long march is attended with risks on account of the great summer heat here experienced and the icy north-east gales to which it is exposed in the winter and spring. This great depression or trough of Yen-tun extends far away to the east, as our surveys of 1914 proved, and serves apparently as a main conductor for the bitterly cold winds which sweep from Southern Mongolia across the eastern Kuruk-tāgh and down to the Lop basin. Carcases of transport animals marked the route all the way from K'u-shui; nor are losses in human lives unknown here. From Yen-tun another march, over similar gravel wastes but much shorter, brings the traveller to the springs of Chang-liu-shui (Map No. 73. D. 2) at the southern edge of a wide belt of loess ground which receives subsoil water from the snows of the Karlik-tāgh and is covered with abundant scrub and reed-beds. At Chang-liu-shui the first tiny patch of Hāmi cultivation is met, and after two more easy marches the town of Hāmi, or Kumul, is reached in the central oasis.

Record of Hsüan-tsang's journey.

With these topographical features of the route from An-hsi to Hāmi the essential points in the story of Hsüan-tsang's desert journey, as related in the *Life*, can be shown to be in close agreement. This agreement is all the more remarkable because we are unable to control here the statements of the *Life* by the text of the *Hsi-yü-chi*, since Hsüan-tsang's own account of his travels does not begin until after his departure from Kao-ch'ang or Turfān. An obvious lacuna in the story of the *Life*, which we shall have occasion to notice presently, can cause no surprise, considering what we know

of his water-skin by dropping it (*Vie*, p. 29), point to a somewhat later season of the same year. Between December and February, water carried in a skin on a route across the Pei-shan would certainly be hard-frozen.

[5] See Map No. 80. B. 2 for the actual boundary mark. Hsing-hsing-hsia itself is a post garrisoned from Hāmi with a somewhat larger number of men; it boasts also of a temple (see *Desert Cathay*, ii. Fig. 257).

about the vicissitudes which the text of Hui-li's biography had undergone before it was published.[6] This text is manifestly imperfect in places and awaits future critical treatment. But a variety of details and personal touches seem to me to support the impression that Hui-li gathered this graphic account of the desert adventures direct from the Master himself and has reproduced it with faithfulness. We know too much of Hsüan-tsang's pious ardour and naïve credulity to discredit the few references to supernatural incidents: they obviously reflect genuine subjective illusions such as conditions of intense strain and real peril were most likely to produce in a mind so devout and fervid.

Adventures of Hsüan-tsang at watch-towers.

The main facts about the journey to be gathered from Hui-li's narrative are as follows: Forsaken by the 'young barbarian' who was to act as his guide, soon after the start from the Su-lo Ho bank, the pilgrim moves ahead alone, guiding himself along the track by the bones of dead animals and the droppings of horses.[7] Visions of armed hosts in the distance cause him alarm, only to disappear on closer approach, 'vain images created by demons'. Obviously mirages are meant here, such as I frequently observed on my first few marches beyond An-hsi in spite of the autumnal coolness which had set in by that time in the desert. After covering 80 li, Hsüan-tsang arrives at the first signal-tower. In order to pass it unobserved he hides himself until nightfall. On trying then to replenish his water-bottle from the water near the tower, he is shot at with arrows by the men on guard. On declaring himself a monk come from the capital, he is taken before the commandant of the post. This man, a native of Tun-huang, called Wang-hsiang, receives him kindly and, having failed to persuade him to return, directs him in the morning to proceed to the *fourth* tower, commanded by a relative of Wang-hsiang. Arriving there the same night he goes through a similar experience. After having been first shot at by the guards, he is taken before the commandant, who on learning of Wang-hsiang's message offers hospitable welcome, but warns him not to approach the fifth and last watch-tower as it is held by men of violent disposition. Instead, he is advised to go to a spring a hundred li off, called *Yeh-ma-ch'üan*, 'the Spring of the Wild Horses',[8] and to replenish there his water-supply.

Hsüan-tsang loses himself in *Mo-ho-yen* desert.

'A short distance from there he entered the desert called *Mo-ho-yen* 莫賀延,[9] which has a length of 800 li and which in ancient times was called *Sha-ho*, or the "River of Sand". One sees there neither birds nor quadrupeds nor water nor pasture.' In this desert he loses his way, after having been troubled again by demonic visions, i.e. mirages, and fails to find the 'Spring of the Wild Horses'. To add to his distress he drops the big water-skin he had been given at the fourth tower and loses its contents.[10] 'Besides, as the route made long detours, he no longer knew which direction to follow. He then meant to turn back to the east, towards the fourth signal tower.'[11] But after having thus proceeded for 10 li he thinks of his oath not to take his way eastwards again until he had reached India. He thereupon, 'fervently praying to Kuan-yin, directed himself to the north-west'. All round he sees only limitless plains without a trace of men or horses. Troubled at night by lights lit by wicked spirits and in day-time by terrible sand-storms, he suffers cruel torments from thirst. After having travelled thus for four nights and five days without water, he lay down exhausted. In the middle of the fifth night, after fervent prayers to Kuan-yin,

[6] Cf. Julien, *Vie*, Preface, pp. lxxviii sq.

[7] See Julien, *Vie*, pp. 23 sqq. Beal's translation, *Life of Hiuen-tsiang*, pp. 17 sqq., appears to be a mere version of Julien's and offers no help, beyond correcting an obvious error in the figure given for the length of the Mo-ho-yen desert.

[8] This name *Yeh-ma-ch'üan* 野馬泉 is still a frequent designation for desert localities beyond the Kan-su border. I heard it applied, e.g., to a spring on the route I followed in 1914 from Mao-mei towards the Karlik-tāgh.

[9] This is the correct transcript of the name; cf. Julien, *Mémoires*, ii. 516; Chavannes, *Turcs occid.*, p. 74, note 3. Beal, *Life of Hiuen-tsiang*, p. 21, reproduces Julien's erroneous transcript *Mo-kia-yen*, but corrects Julien's 'quatre-vingts li', one of the great Sinologue's not infrequent lapses in the matter of figures, rightly into 800 li.

[10] By Julien's 'grande outre d'eau' evidently a water-skin or 'Mussuck' is meant.

[11] See Julien, *Vie*, p. 29.

he feels refreshed by a cool breeze and finds rest in short sleep. A divine vision seen in his dream urges him to move ahead. After about 10 li his horse, which also had managed to get on its legs afresh, suddenly turns into another direction and after a few more li carries him to a plot of green pasture. Having allowed his horse to graze he is about to move on when he discovers a pool of clear water and feels saved. After a day's halt at this spot he continues his journey with a fresh supply of water and fodder, and emerging from the desert arrives at I-wu.

Lacuna in text of *Life*.

If we compare the account of Hsüan-tsang's desert crossing here briefly summarized with the actual topography of the route from An-hsi to Hāmi, as set forth above in its main features, we cannot fail to recognize their close accord in essential points, as well as an apparent lacuna in the text of the *Life* as at present available. This makes the pilgrim proceed in a single march from the first signal-tower to the fourth. But this is clearly in contradiction to the plain statement contained in a previously quoted passage of the *Life*, which reproduces the information given to Hsüan-tsang at Kua-chou concerning the route:[12] 'To the north-west, beyond this barrier, there are five signal-towers where the guards entrusted with keeping the look-out reside. They are a hundred li apart, one from the other.' We are thus led to assume that Hsüan-tsang in reality had to cover four marches from the river before reaching the fourth tower, and that in the narrative presented by the extant text two of these marches have been left unrecorded.

Agreement of record with topographical facts.

Once allowing for this lacuna, of which the exact explanation cannot now be traced, but which unfortunately has its only too frequent counterparts elsewhere in the *Life*, we find it easy to reconcile the information recorded about the stages and incidents of the desert journey with the topographical facts. That the position indicated for the first signal-tower clearly points to the present Pei-tan-tzŭ, the first stage from An-hsi, has been shown above.[13] The 480 li reckoned from the Su-lo Ho to the fifth signal-tower are in remarkably exact agreement with the 96 miles marching distance recorded by cyclometer on our journey between the river and Hsing-hsing-hsia, the fifth halting-place on the present road. The statement about the dreaded Mo-ho-yen desert extending beyond the fifth signal-tower is in perfect accord with the change which the character of the ground undergoes after leaving Hsing-hsing-hsia. Nor is there any difficulty about showing that all the matter-of-fact indications which can be gathered from the narrative about Hsüang-tsang's crossing of this desert are consistent with what the map indicates.

Hsüan-tsang's 'Spring of the Wild Horses'.

We are told that the traveller, having been advised to avoid the fifth signal-tower, i. e. Hsing-hsing-hsia, turned off from the main route at the fourth tower in order to reach the 'Spring of the Wild Horses', at a distance of a hundred li. When he failed to find this and thought of regaining the fourth tower, he is said to have turned back to the east.[14] This makes it quite clear that the Yeh-ma-ch'üan spring to which he had been directed must have lain in a westerly direction. Now a reference to the Russian Trans-frontier map shows that the route from Tun-huang to Hāmi, as surveyed by Captain Roborovsky's expedition, passes at a distance of about 30 miles west of Ma-lien-ching-tzŭ before joining the An-hsi–Hāmi road at K'u-shui,[15] and that one of its halting-places with water is to be found at about that distance to the west-north-west of Ma-lien-ching-tzŭ. Thus the existence, in the past or present, of a spring approximately in the position assumed for the Yeh-ma-ch'üan which Hsüan-tsang vainly sought for becomes plausible enough. That the pilgrim unguided failed to find it is an experience with which I became only too often and painfully

[12] See above, p. 1097; Julien, *Vie*, p. 17.

[13] Cf. above, p. 1098. This form of the name, as communicated to me by Mr. Li at An-hsi, seems more correct than the *Pi-ling-tzŭ* of Map No. 81. c. 1.

[14] See Julien, *Vie*, p. 29.

[15] See Sheet XXI of the Asiatic Trans-frontier Map (40 versts to 1 inch); also Map II in the Russian Geographical Society's publication on the results of Captain Roborovsky's expedition.

familiar myself when we made our way in September, 1914, across unexplored portions of the eastern Pei-shan.[16]

Hsüan-tsang's route beyond Ma-lien-ching-tzŭ.

In any case it is certain that if at the present day a wayfarer to Hāmi had reason to avoid observation at Hsing-hsing-hsia, he could do no better than leave the main route at Ma-lien-ching-tzŭ and strike to the west-north-west. He would have to cross there a continuation of what appears to be the highest of the hill ranges of the Pei-shan, the one which the main road passes in tortuous gorges just above Hsing-hsing-hsia.[17] On such ground it would obviously not be possible to follow a straight line, and this circumstance may well account for the passage in the narrative telling us that 'as the route made long detours, he no longer knew which direction to follow'.[18] After the unsuccessful search for the 'Spring of the Wild Horses' we are told that Hsüan-tsang turned resolutely to the north-west and continued his journey undaunted by thirst and the perils of the desert. It was a resolve needing all the religious fervour and courage of the great pilgrim, but it was also the wisest course to follow—for one who knew how to keep up that bearing. And that Hsüan-tsang possessed fully that instinct of the compass, so prevalent among Chinese of whatever condition, is abundantly proved by the topographical records he has left us in his *Hsi-yü-chi.*

Marches through trackless desert.

As the map shows, this course to the north-west was bound to carry the traveller across the utterly barren gravel glacis about K'u-shui down to the Yen-tun depression, and beyond this to the south-eastern edge of the loess belt where subsoil drainage from the Karlik-tāgh supports vegetation. We are told that on this progress across the Mo-ho-yen desert he went without water for four nights and five days, until after the refreshing rest of the fifth night his hardy mount carried him a few miles beyond to pasture and water in a pool. Here we find once again that the approximate distance reckoning, as indicated by the record of the *Life*, is in as close agreement with the actual topography as we could reasonably expect; for we have seen that on the present caravan road five marches are needed to bring the traveller from Ma-lien-ching-tzŭ, i. e. the fourth signal-tower, to Chang-liu-shui, the first place with springs and verdure on the Hāmi side, the total marching distance amounting to about 106 miles. There may have been wells then as now on the regular route leading from the fifth watch-station to Hāmi, in positions corresponding, or near, to Sha-ch'üan-tzŭ, K'u-shui, Yen-tun. But how difficult, if not impossible, it would have been for Hsüan-tsang, once off the caravan track, to find them I know only too well from my own personal experience on similar desert ground. The line he followed obviously lay parallel to the route. Yet this might easily have remained hidden from him, even if approached within a few miles.

Authenticity of record in *Life* confirmed.

That it was the scent or local sense of his horse which enabled Hsüan-tsang in the end to reach the saving spring before succumbing to thirst and exhaustion distinctly strengthens, in my belief, the authenticity of the record as presented by Hui-li. We have been told in it before how Hsüan-tsang, when preparing for his adventurous start at Kua-chou, had wisely by exchange for his own secured this horse from an old 'barbarian' who had ridden it more than fifteen times to Hāmi and back.[19] The remarkable way in which horses and camels in the desert can scent water and grazing from considerable distances, or correctly locate such places remembered from previous visits, is too well known to need my personal testimony.[20] The accuracy of Hui-li's narrative

[16] Cf. *Third Journey of Exploration, Geogr. Journal*, xlviii. p. 200.

[17] See Maps Nos. 80. A, B. 1; 77. C, D. 1

[18] Cf. Julien, *Vie*, p. 29; above, p. 1144.

[19] See Julien, *Vie*, p. 21: '"Master," said the old man, "since you are decided to start, you must mount my horse. More than fifteen times already, going and coming back, he has done the journey to I-wu. He is strong and knows the routes. Your horse, on the contrary, is weak and will never reach there."'

[20] But cf., e.g., *Desert Cathay*, i. p. 422.

I may add here that the fact of a horse trained to desert travel being able to go for five days without water has nothing improbable in itself. On my crossing of the Taklamakān to the Keriya River end our few ponies could not be watered for close on four days; yet judging from their condition they

asserts itself to the very end; for the two more days which it makes Hsüan-tsang spend *en route* before reaching Hāmi correspond exactly to the two marches now needed to arrive from Chang-liu-shui at Hāmi town, a distance of about 35 miles. Thus we can close the story as preserved in the *Life* with the gratifying assurance that even this chapter of the pilgrim's travels, which by its adventurous character might most readily have lent itself to exaggeration and fiction, has retained in Hui-li's biography the form in which it may well have been told by the lips of the Master of the Law himself.

Section II.—THE HISTORICAL RÔLE OF HĀMI

Hāmi's importance for China.

Hāmi has played so important a part in the story of China's relations with Central Asia that I felt particularly glad for the chance which the northern route chosen for my return to the Tārīm Basin offered to visit this ground. But my stay at the main oasis of Hāmi, or Kumul, as it is known to Turkī Muhammadans, and my visits to a few of its outlying villages were far too short to justify any attempt here to review the present conditions of the territory or its past as a whole. Referring for the rapid impressions that I could gather of it and its people to my Personal Narrative,[1] I shall content myself with briefly calling attention to those essential geographical facts which account for that historical rôle of Hāmi and explain the importance of the territory notwithstanding the limited nature of its local resources.

Analogy between Hāmi and Lou-lan.

Our records clearly show that Hāmi, or Kumul—to give its name as best known now to Turkī Muhammadans[2]—ever since Later Han times has, in respect of all Chinese enterprise directed towards Central Asia, occupied exactly the same position on the northern route as Lou-lan did on the southern from the beginning of Chinese expansion westwards and throughout the Former Han period. An examination of the map suffices to account for this striking analogy. Just as without Lou-lan as a bridge-head and base on the western side of the Lop desert the use of the most direct line of access to the Tārīm Basin would have been physically impossible for the Chinese, thus, too, it would have been most difficult for them to open up and secure the direct route leading to the territories on both sides of the eastern T'ien-shan had not nature offered them, in the cultivable tract of Hāmi, a foothold to the north-west of the Pei-shan desert. Limited as the extent of arable land, or rather of irrigation, available must always have been during historical times, the agricultural resources of Hāmi developed with the help of Chinese military colonists have proved again and again of the utmost importance for the Empire's Central-Asian policy. Whenever since A.D. 73 China found strength to reassert its claim to Central-Asian dominion, it was Hāmi which served as the gathering-place and supply base for the Chinese forces sent to overcome hostile nomadic powers in the north, Huns, Turks, Dzungars, or to suppress rebellion, as last in 1876–7. In the same way trade and traffic of every sort would always, down to our own times, have found the Pei-shan desert a far more formidable obstacle had not Hāmi offered itself as a place where caravans could revictual and allow their animals a good rest.[3]

Hāmi indispensable as supply base.

might well have held out for some days longer. It must be noted also that the going on the uniform gravel slopes and plateaus of the Pei-shan is far less tiring to horses, and to men, too, than the crossing of dune-covered areas in the Taklamakān.

[1] See *Desert Cathay*, ii. pp. 342 sqq.

[2] For the origin of the name *Hāmi* used by the Chinese since the Mongol dynasty and probably derived from the *Khamil* of the Mongols, cf. Yule, *Marco Polo*, i. p. 211, note; Bretschneider, *Medieval Researches*, ii. p. 20; Imbault-Huart, *Le pays de 'Hami ou Khamil*, Paris, 1892, pp. 10 sq.

Kamul seems to be the form in which the Turkish name of the territory is generally reproduced by early Western travellers; cf. Yule, *Marco Polo*, i. p. 209; Marignolli in Yule-Cordier, *Cathay*, iii. p. 265; *ibid.* i. p. 273, iv. p. 239, for the accounts of Shāh Rukh's embassy and Benedict Goës. The name as heard by me locally sounded *Kumul*.

[3] The value of Hāmi in this respect is well brought out by the description which Marco Polo gives, though he does not appear to have been there in person. 'Camul is a province

Irrigation resources of Hāmi limited.

The existence of the Hāmi oasis is due solely to the irrigation facilities derived from its vicinity to that easternmost portion of the T'ien-shan which, as its name *Karlik-tāgh* shows, rises high enough to catch adequate moisture and bear permanent snow-beds. But, as seen in Maps Nos. 72, 76, the length of this snowy end of the T'ien-shan is not great—only about 25 miles or so on the crest line—and the total volume of drainage from the range is not sufficient to pass on the surface over the piedmont gravel slopes at its south foot except on occasion of rare rain-floods. Much of the water is lost there by evaporation. Hence only the subsoil drainage coming to light in the form of marshy springs at the lower edge of the gravel glacis, after the fashion of the *kara-su* of the Khotan-Keriya region,[4] is permanently available for the irrigation of the fertile loess belt further down. The result is that, leaving aside the small patches of arable ground to be found in the confined valleys of the Karlik-tāgh, cultivation in the Hāmi tract is restricted to the narrow strips of fertile soil which canals taken from the low-lying spring basins just referred to can command. Even in the case of the main oasis the greatest width is only about five miles, and a good deal of the area thus included is not capable of cultivation owing to marshy soil or for other reasons. There are no rivers sufficiently large to fertilize alluvial fans of corresponding size from the point of their debouchure, as is the case at Khotan, Yārkand, Kuchā, etc. On this account Hāmi cultivation, in spite of the fertility of the soil which all Chinese accounts rightly emphasize and of favourable climatic conditions, could never have supported more than a limited population.[5] In this respect, too, the analogy to Lou-lan holds good.

Hāmi as compared with Lou-lan.

But if both Lou-lan and Hāmi were thus destined to serve as bridge-heads for the Chinese during successive periods of advance beyond the deserts bounding Central Asia on the east, the difference of geographical position between the two territories necessarily made itself felt otherwise. When discussing Lou-lan and the ancient route leading to it from the Kan-su marches, I had occasion to point out how well protected this route was against hostile interference from the north.[6] The broad desert belt of the Kuruk-tāgh with its utterly barren plateaus provided an effective natural defence against raiding attacks from the north of the T'ien-shan, where Huns as well as their nomad successors found their grazing grounds. On the other hand, we have also noted how precarious the use of that bridge-head must have been from the first owing to special physical difficulties besetting irrigation. These are always inseparable from the maintenance of a distant terminal oasis in the desert; aided probably by progress of desiccation, they led in the end, as we have seen, to Lou-lan being abandoned altogether in the fourth century A. D.[6a]

In the case of Hāmi we find these conditions exactly reversed. There the water-supply needed for cultivation, limited as it is by nature, could never have been seriously threatened during

which in former days was a kingdom. It contains numerous towns and villages, but the chief city bears the name of Camul. The province lies between the two deserts; for on the one side is the Great Desert of Lop, and on the other side is a small desert of three days' journey in extent. The people are all Idolaters, and have a peculiar language. They live by the fruits of the earth, which they have in plenty, and dispose of to travellers.' Cf. Yule, *Marco Polo*, i. pp. 209 sq.

The 'small desert of three days' journey' refers to the barren ground to be crossed to Bar-kul, the nearest oasis, which can be reached in three rather long marches northward. 'The shameful custom' of the people that he proceeds to relate looks like a 'travellers' tale' travestying the very hospitable and easy-going ways which are still very noticeable among the village folk of Hāmi.

[4] Cf. *Ancient Khotan*, i. 94, 126; above, p. 204.

Thus one main source of the water-supply of the central oasis lies in the springs of the marshy depression known as *Sai-bāshi*, about two miles to the north of Hāmi town. There is a similar area further to the north-east near the flood bed of the stream which descends from Edira and Kara-kapchin (Map No. 73. c. 1).

[5] See Imbault-Huart, *Le pays de 'Hami ou Khamil*, Paris, 1892, pp. 18 sqq. This useful publication reproduces lengthy abstracts of modern Chinese accounts of Hāmi mainly from works compiled under the Emperor Ch'ien-lung. The total population of the territory was then estimated at some 12,000 souls, a figure which is not likely to be exceeded by the present number if the considerable floating settlement of traders, caravan-men, etc., from outside is excluded.

[6] See above, pp. 584 sq.

[6a] Cf. above, pp. 426 sq.

historical times either by climatic changes or by those diversions to which river-courses are peculiarly liable in deltaic regions. On the other hand, Hāmi must at all times have been particularly exposed to hostile inroads from the north. The ground along the whole north slope of this portion of the T'ien-shan, being subject to a much less arid climate, affords plentiful grazing, as I was able to realize fully on my passage to Bar-kul and Guchen in 1914. It must for this reason always have attracted nomads and facilitated raiding exploits. Abundant evidence in the Chinese historical records of Han and T'ang times shows how strong and prolonged the hold of the Huns and their nomad successors was upon this ground. Passes practicable at all seasons, both to the east and to the west of the Karlik-tāgh, give ready access from the north to the plain of Hāmi and, no doubt, greatly facilitated raids. Thus from the Bar-kul-dawān (Map No. 72. c. 3), which is easy enough to be crossed by carts, the central oasis can be reached in a single day's ride.

Hāmi exposed to inroads from north.

This constant liability to northern attack, from which Hāmi has suffered whenever Chinese power in Central Asia weakened, is fully illustrated by its chequered history, as recorded in the Chinese Annals, and right down to our own times. To follow in detail these *péripéties* in the fate of *I-wu* 伊吾, as Hāmi was known to the Chinese from Han to T'ang times, does not come within the scope of my task here.[7] As regards the former period, it will suffice to point out that within four years of the first establishment of a Chinese military colony in A.D. 73 I-wu was lost again to the Hsiung-nu;[8] reoccupied between A.D. 90–104, it suffered once more the same fate.[9] The notice concerning the re-establishment of a military colony there in A.D. 131 brings out clearly the strategic value which the Chinese rightly attached to Hāmi.[10] But obviously their hold upon it ceased when imperial control over the 'Western regions' was abandoned after the middle of the second century. The submission of Hāmi to the last Emperor of the Sui dynasty, in A.D. 608, proved equally short-lived, the Western Turks soon recovering their hold upon it.[11] But when the great T'ang Emperor T'ai-tsung about A.D. 630 commenced those operations against the Western Turks which within twenty years led to the extension of Chinese political control over the whole of Eastern Turkestān and even beyond, we find the chief of Hāmi among the very first to seek protection under the Empire.[12]

Hāmi from Later Han to T'ang times.

We know little or nothing as to how Hāmi fared during the troubled times of the eighth century when the Turks from the north and the Tibetans from the south were ever threatening, and at last completely severed, the communications between China and the Western countries it endeavoured to 'protect'. But when, nearly a thousand years later, the extension of Chinese power into Central Asia was started afresh by the Emperor K'ang-hsi's operations against the Dzungars, Hāmi once again suffered much in its accustomed rôle as an advanced base contested by both powers.[13] How

Hāmi since Chinese reconquest of Turkestān.

[7] For a comprehensive account of the history of Hāmi, particularly useful from the Mongol period onwards, see Imbault-Huart, *Le pays de 'Hami ou Khamil*, pp. 28 sqq. For the earlier epochs more exact information has since been made accessible through M. Chavannes' translations in *Les pays d'occident d'après le Heou Han Chou* (*T'oung-pao*, 1907, pp. 156 sqq.) and *Turcs occid.*, pp. 169 sq. and *passim* (see Index). Ritter had clearly realized the historical importance of Hāmi, and the full analysis of the notices available to him, given in *Asien*, ii. pp. 357–8, can still be referred to with profit.

[8] Cf. Chavannes, *T'oung-pao*, 1907, pp. 156, 158.

[9] See Chavannes, *ibid.*, pp. 158, 160.

[10] Cf. Chavannes, *ibid.*, p. 167; the advantage which the Hsiung-nu derived from Hāmi in making their predatory inroads is specially referred to.

The notice of the Later Han Annals (Chavannes, *T'oung-pao*, p. 169), describing the northern route which passed I-wu, enumerates the products of Hāmi and emphasizes the fertility of its soil, like that of the Turfān depression. 'That is why the Han have constantly disputed Chü-shih (the present territories of Turfān and Guchen) and I-wu with the Hsiung-nu in order to dominate the Western countries.'

[11] Cf. Chavannes, *T'oung-pao*, 1907, pp. 169 sq.; see also Imbault-Huart, *Le pays de 'Hami ou Khamil*, p. 31.

[12] Cf. Chavannes, *T'oung-pao*, 1907, p. 170; Imbault-Huart, *loc. cit.*, p. 32.

[13] See Imbault-Huart, *ibid.*, pp. 44 sqq.; Ritter, *Asien*, ii. pp. 370 sq.

difficult it has always been for the Chinese to keep this exposed bridge-head of Hāmi while control over the territory north was not yet secured or had been lost was seen anew during the last great Muhammadan rebellion. The oasis then repeatedly changed hands between the Chinese and the Tungans coming from Bar-kul, and for years became almost wholly deserted.

Hāmi route not opened by Former Han.

These circumstances resulting from the geographical position of Hāmi enable us to account for what might otherwise seem a puzzling historical observation. I mean the fact that the 'northern route' leading through Hāmi, though physically so much easier than the one leading through the Lop Desert and Lou-lan, was not opened by the Chinese until nearly two centuries later. Obviously Chinese statesmanship fully realized the difficulties of holding an advanced base so exposed as Hāmi as long as the power of the Hsiung-nu in the north remained unbroken. It was safer to fight the difficulties of nature than to face the attacks of an elusive, irrepressible foe. When later on the necessity was felt of securing more direct access to 'Posterior Chü-shih', i. e. the region of the present Guchen, ever closely linked with Turfān, it was not the route via Hāmi which was opened in A.D. 2, but the desert track starting to the north of the ancient Jade Gate and described in the *Wei lio* as the 'new northern route'.[14] When discussing this above, we have seen that its line kept well away from Hāmi and trusted to the protection of waterless desert wastes.

Mixed population of Hāmi.

It may be due to the same factor of geographical position and to the political vicissitudes implied by it that the population of Hāmi does not appear to have ever possessed that well-defined individuality in ethnic character and local culture which records, remains, and extant characteristics of race attest for territories like Khotan, Kuchā, or Turfān, and which might be expected in a community so isolated geographically. The present population seemed to me to have been affected far more by Chinese influence in language, manners, and dress than that of any other Turkestān tract I know. At the same time, in its physical features the admixture of a purely Turkish element appeared to me to be more marked than among the Turkī-speaking peoples which form the settled agricultural communities in the oases of the Tārīm Basin.[15] In these Mr. Joyce's examination of the anthropometric materials collected by me has proved that the *Homo Alpinus* type of an originally Iranian stock prevails. Mr. Joyce's results also point to a distinctly mixed character of the population of Hāmi.[16]

Fresh colonies brought to Hāmi.

This mixture of disparate elements is easily accounted for by the history of Hāmi. For more than fifteen hundred years past the oasis has been an important halting-place on the main line of communication between China and Central Asia. The fertility of its soil must have greatly facilitated the process of re-population by fresh agricultural colonies, whether from China or Turfān and the Tārīm Basin, after each destructive inroad. The admixture of a genuinely Turkish element is explained by the close vicinity northward of an area possessed of distinct attractions to a nomadic race such as the Western Turks were, and at the same time affording in the Karlik-tāgh valleys opportunities for transition to a settled agricultural life.[17] Even now Hāmi possesses its purely Chinese agricultural colony, brought here since the Tungan upheaval, side by side with the Turkī-speaking Muhammadan population left under the administration of its own hereditary chief.

Hereditary local chief of Hāmi.

Descended from the family which held Hāmi when it passed from Dzungar domination under Chinese control in the last quarter of the seventeenth century, he is the only local ruler now left in

[14] See above, pp. 418 sq., 705 sqq.

[15] See Fig. 263 for a group of Hāmi cultivators from Ara-tam.

[16] See Joyce, Appendix *C*, reproducing *Notes on the physical anthropology of Chinese Turkestan and the Pamirs*, *J. R. Anthrop. Institute*, xlii. pp. 462, 464; regarding the basal stock of *Homo Alpinus* type, *ibid.*, p. 468.

[17] On my journey of 1914 along the north slopes of the Karlik-tāgh I had occasion actually to observe this transition among people who, whether settled as cultivators or still living as herdsmen, are manifestly of the same Turkish stock. The Kirghiz settlements of the western T'ien-shan, in the region of Kāshgar and elsewhere, seem to offer a close parallel.

power in the New Dominions. His régime is of interest as affording a lingering trace of that system of indigenous administration under Chinese political control which the Annals show to have prevailed everywhere during earlier epochs of Chinese dominion in Central Asia.

Section III.—THE RUINS OF ARA-TAM AND LAPCHUK

Buddhist remains outside Hāmi.

As late as Marco Polo's time the population of Hāmi appears to have been still wholly Buddhist. Even more than a century later Shāh Rukh's embassy found there 'a magnificent mosque and convent of Derwishes in juxtaposition with a fine Buddhist temple'.[1] No remains of pre-Muhammadan origin are now traceable within the main oasis of Hāmi. Outside Hāmi proper, however, Buddhist structures of a relatively late period are still standing, and, scanty as the available time was, I managed to make a rapid survey of them in two localities. An excursion commenced on October 24 was directed to the north-east, and helped also to facilitate topographical work which was carried out by R. B. Lāl Singh across the southern spurs and valleys of the Karlik-tāgh.

Watch-tower on Bar-kul road.

The first march took us north across the great fan of piedmont gravel to the little village of Töruk at the foot of the mountains. It gave me an opportunity of examining *en route* the massive watch-tower known as Akchik-karaul (Map No. 73, c. 1), to which great antiquity is ascribed by the people of Hāmi. It proved to be a solid mass of masonry in sun-dried bricks, about 40 feet square at the base and rising with sloping faces to approximately the same height. The rapid examination I was able to make on the approach of nightfall disclosed no definite clue to the age of the tower, but left no doubt that it was considerably older than the rubble-built wall, also in ruins, about 90 feet square which surrounds it. The tower had obviously been intended to serve as a signal-station and place of refuge in case of sudden attacks from across the mountains. Its position was specially well chosen for this purpose, as it commands a view of the routes which lead down from the passes towards Bar-kul and Tör-kul (Map No. 72. c. 3, d. 4).

Position of *Ara-tam*.

From Töruk I made my way along the barren foot of the mountains south-westwards to Ara-tam, at the debouchure of the Bardash stream (Map No. 73. d. 1), where remains of ruined temples were reported. They proved to be situated quite close to a picturesque country seat of the 'Wang', or chief, of Hāmi and surrounded by extensive orchards, which form part of the domain and are far-famed for their produce. In my Personal Narrative[2] I have fully described the delightful setting provided for the ruins by this mass of luxuriant vegetation. Steep and absolutely bare ridges of reddish sandstone form the background through which the snow-fed stream of Bardash breaks in a tortuous, impassable gorge. The panoramic view in Fig. 192 will help to illustrate it. The scenery was the most pleasant in which it has ever fallen to my lot to do archaeological work in Central Asia, and remembering the very different ground on which my labours before, mainly in the desert, had lain, I could not help regretting that there was not work enough at this site to detain me for more than a couple of days.

Local worship at debouchure of stream.

The position of the ruins, as seen in the plan, Plate 48, and their character left no doubt that this was an agglomeration of Buddhist shrines erected at a site which was held sacred as marking the debouchure of a stream precious to the agricultural population. Already in the case of Mount Gośṛṅga, the present Kohmārī of Khotan, I have had occasion to explain how ancient and how tenacious local worship is at such sites where cultivators, during all periods down to the present day, have been accustomed to pray for that main condition of their prosperity, a plentiful volume of water to assure irrigation.[3] Since then I have had abundant occasion on my visits of 1907–8 and

[1] Cf. Yule-Cordier, *Cathay*, i. p. 273. On the other hand, as pointed out by Yule, *Marco Polo*, i. p. 211, note 1, Ḥājī Muḥammad (*circa* 1550) 'speaks of Kamul as the first Mahomedan city met with in travelling from China'.

[2] See *Desert Cathay*, ii. pp. 347 sqq.

[3] Cf. *Ancient Khotan*, i. pp. 189 sq.

1915 to Turfān, Kuchā, and other oases along the south foot of the T'ien-shan to convince myself how common such marks of ancient local worship are at points near canal-heads, there appropriately designated by the name of *Su-bāshi*, 'the water head'.[4] That the limpid stream which cascades down over the boulder-strewn slopes of the Ara-tam orchards deserved such local worship can easily be seen from the map; for apart from creating that profusion of fruit-trees and vines over some hundreds of acres at its very debouchure, it irrigates the fields of Tāsh-ara, and further down the long-stretched belt of village lands above and below Karmukchi.[5]

Buddhist temple ruins.

The ruined shrines of Ara-tam are divided into two main groups, both situated to the west of the Wang's garden palace and, as seen in Fig. 192, close to the foot of the steep outermost range of hills. The group which comprises the temple ruins marked A. I, II in the plans of Plates 47, 48, besides some smaller and badly decayed structures, occupies the top of the easternmost among a row of small gravel-covered hillocks, about 300 yards distant from the Wang's seat. The top of this hillock, seen in Fig. 256, rises to a height of about 120 feet above the level of the nearest irrigated ground. Along its south foot there extends a broad gravel terrace, partially seen on the extreme left of Fig. 192, and about 40 feet above the ground-level. Near its eastern edge were found the remnants of a few small cellas built of sun-dried bricks almost completely decayed. From this terrace a narrow flight of stairs, built over a substructure of boulders and preserved only in its upper portion, led up to the platform, partly artificial, occupied by the main temple A. I (Fig. 256; Plate 47). The walled-up portion of the platform at the south-west corner rises about 16 feet above the natural slope.

Ruined temple A. I.

The ruined temple contained, besides an outer hall measuring about $33\frac{1}{2}$ feet by 20 inside, an oblong cella, $23\frac{1}{2}$ feet by 13, and two flanking rooms apparently approached from without. The walls, varying in thickness from 1 foot 8 inches to $2\frac{1}{2}$ feet, were built both here and in the shrine A. II of sun-dried bricks in rather friable clay, about $12'' \times 6'' \times 4\frac{1}{2}''$. These were set horizontally, the broad and narrow sides facing outwards in alternate layers. The whole interior of the ruin was covered with débris to a height of over 3 feet. Over this a partition wall of later date was found to have been built within the cella, thus proving renewed occupation after the shrine was abandoned. This is also suggested by the designation *Kōne-karaul*, 'the old guard-post', now borne by this group of ruins.

Remains from débris in A. I.

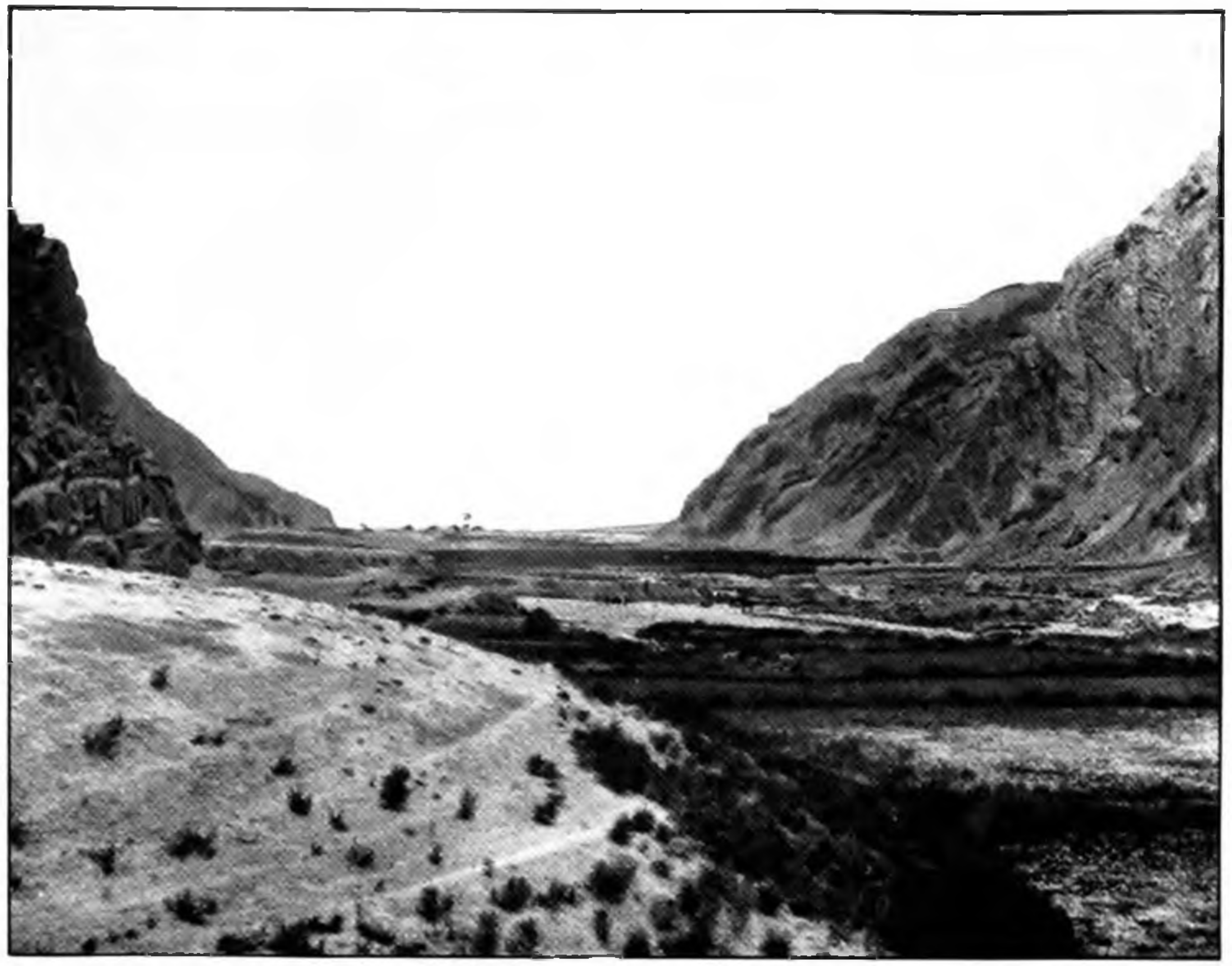
The clearing of the interior of A. I brought to light within the cella a horseshoe-shaped image base 14 inches high and a mass of painted fragments from stucco relievos, all much broken. As seen from the specimens A. I. 001–12 in the Descriptive List below,[6] these fragments must have belonged mainly to small relievo images decorating the cella walls. The lower portion of a life-size stucco figure found in front of the eastern end of the base was badly decayed and had lost most of its painted surface; but the folds of a robe could still be distinguished. Of the frescoes once ornamenting the cella walls only very scanty remains survived among the débris (see A. 001; I. 0013). Plentiful pieces of completely charred woodwork were found within A. I and A. II, thus proving that both shrines had been destroyed by fire. But the poor preservation of the remnants of stucco relief and the almost complete decay of the wall plastering showed clearly the even more destructive effect of atmospheric conditions at this site. Snow was said to fall at Ara-tam in the

[4] It must suffice here to mention such sites as Toyuk, Sengim-aghzi, and Buluyuk of the Turfān district; Su-bāshi and the ruins above Kum-tura near Kuchā; Tezak-kāghe above Bai; cf. also Bāsh-koyumal above Charkhlik.

I may note here that the extensive group of modern Chinese shrines at the springs of Sai-bāshi near Hāmi town marks in all probability an earlier Buddhist site of this character.

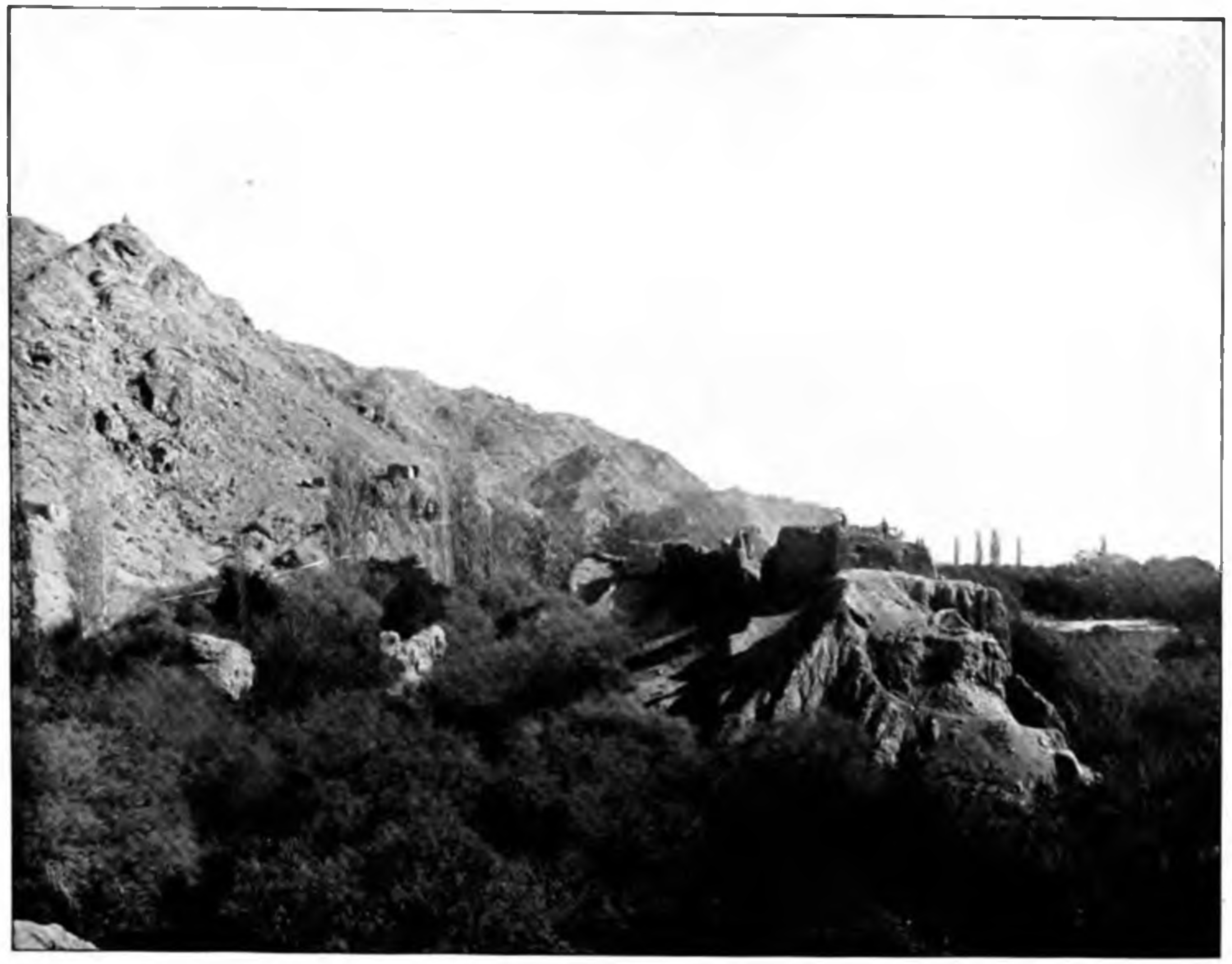
[5] See Map No. 73. C. I, D. I. In the latter section the second entry *Ara-tam* is an error for Tāsh-ara.

[6] See Pl. CXXXIX for A. I. 008, showing the lower portion of a human figure.

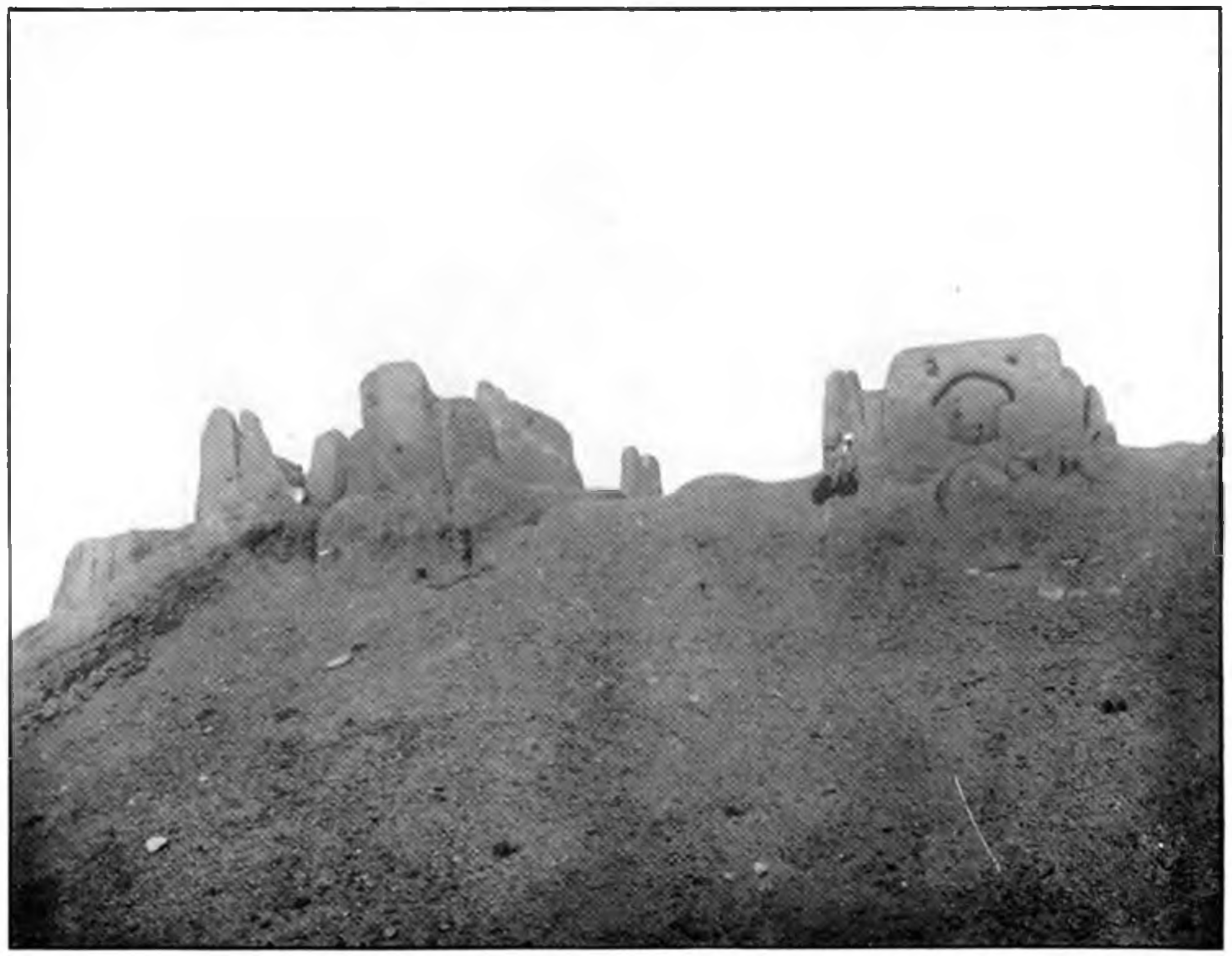


253. HAO-SHAN-K'OU DEFILE, WITH VIEW TO NORTH-EAST TOWARDS HUANG-TSAO-YING VILLAGE.

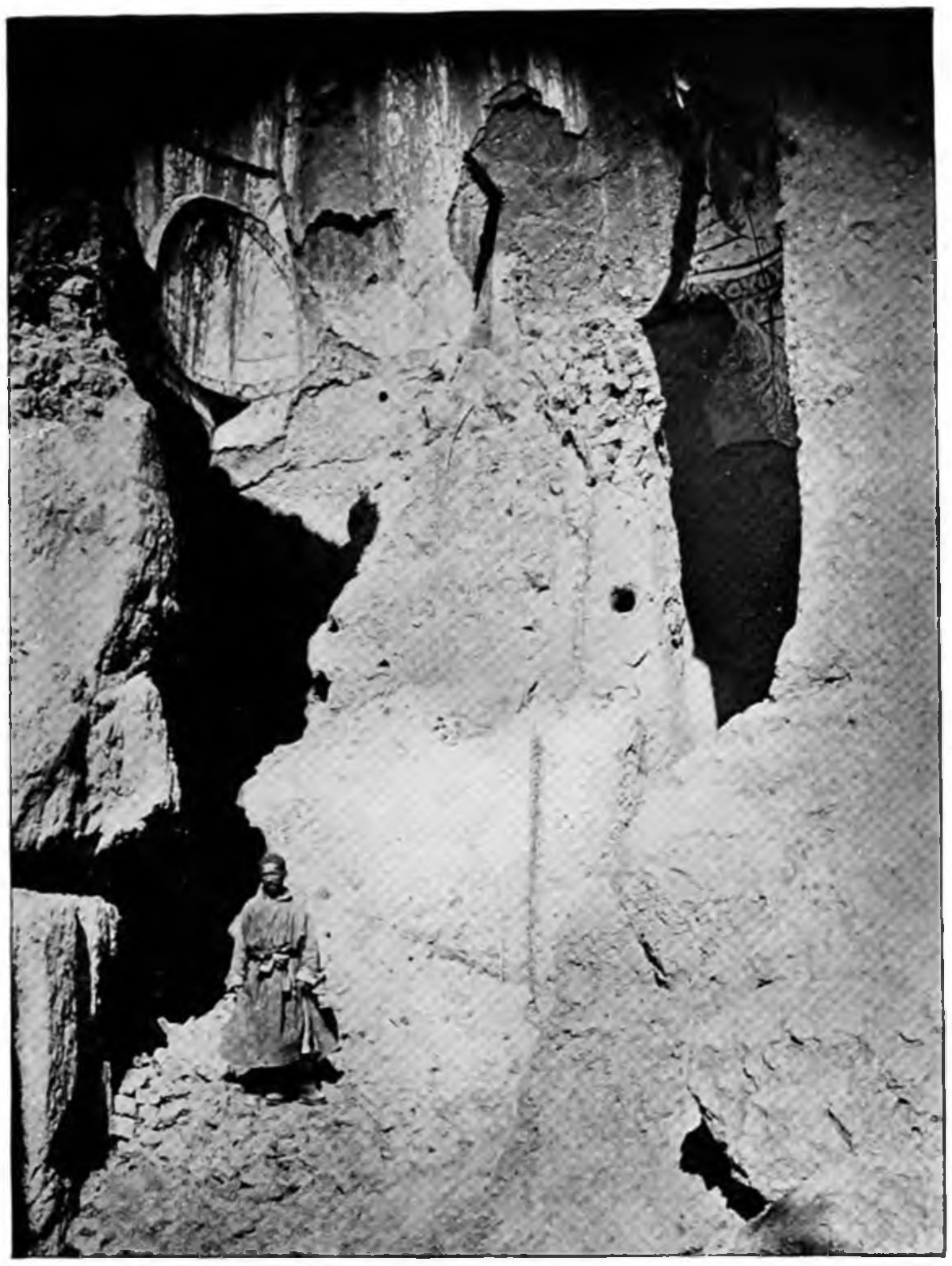
254. MEDIAEVAL 'GREAT WALL' NORTH OF SU-CHOU, NEAR HSIN-CH'ÊNG-TZŬ.



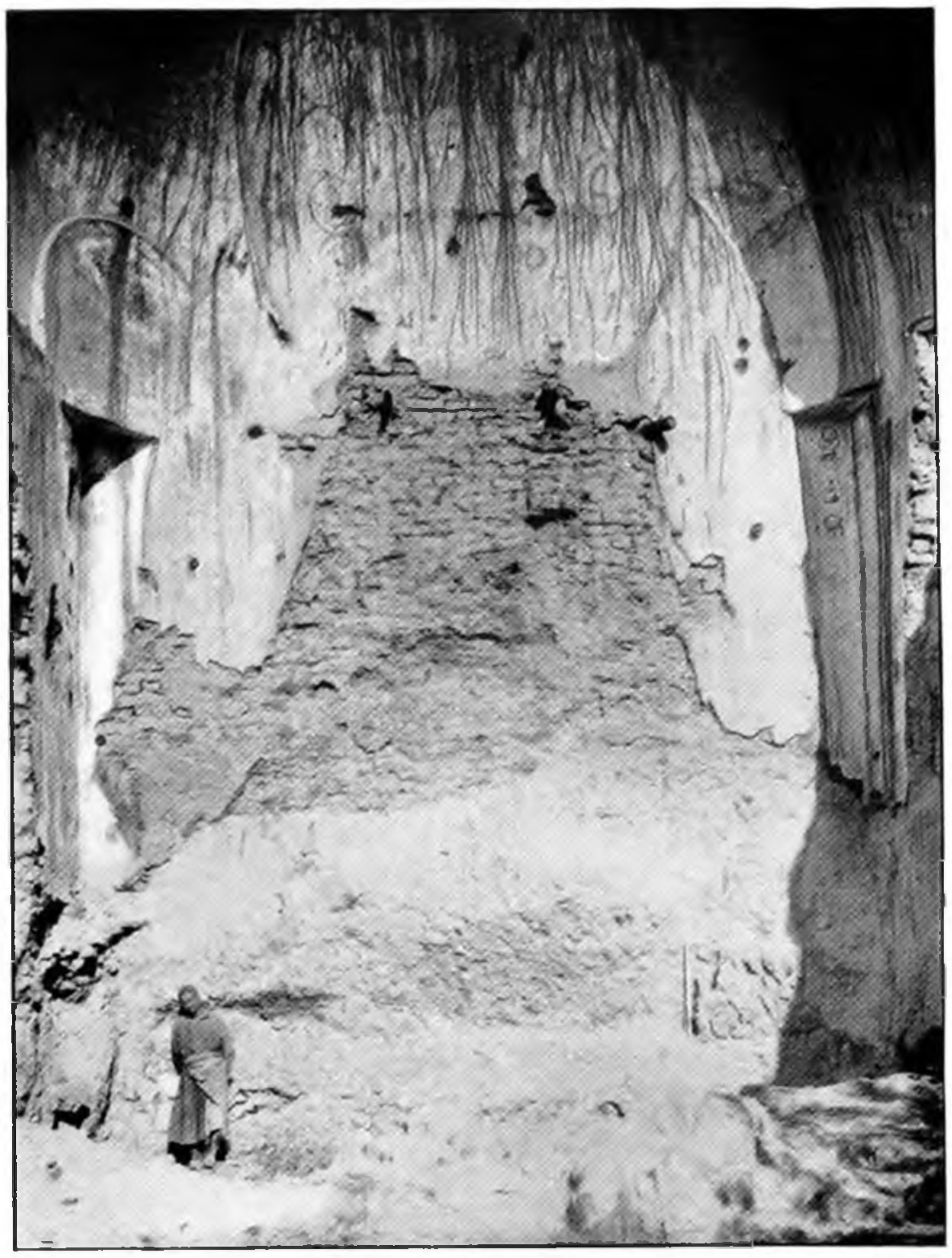
255. CLAY RIDGE BEARING RUINED SHRINES OF A. III, ARA-TAM SITE, SEEN FROM WEST.



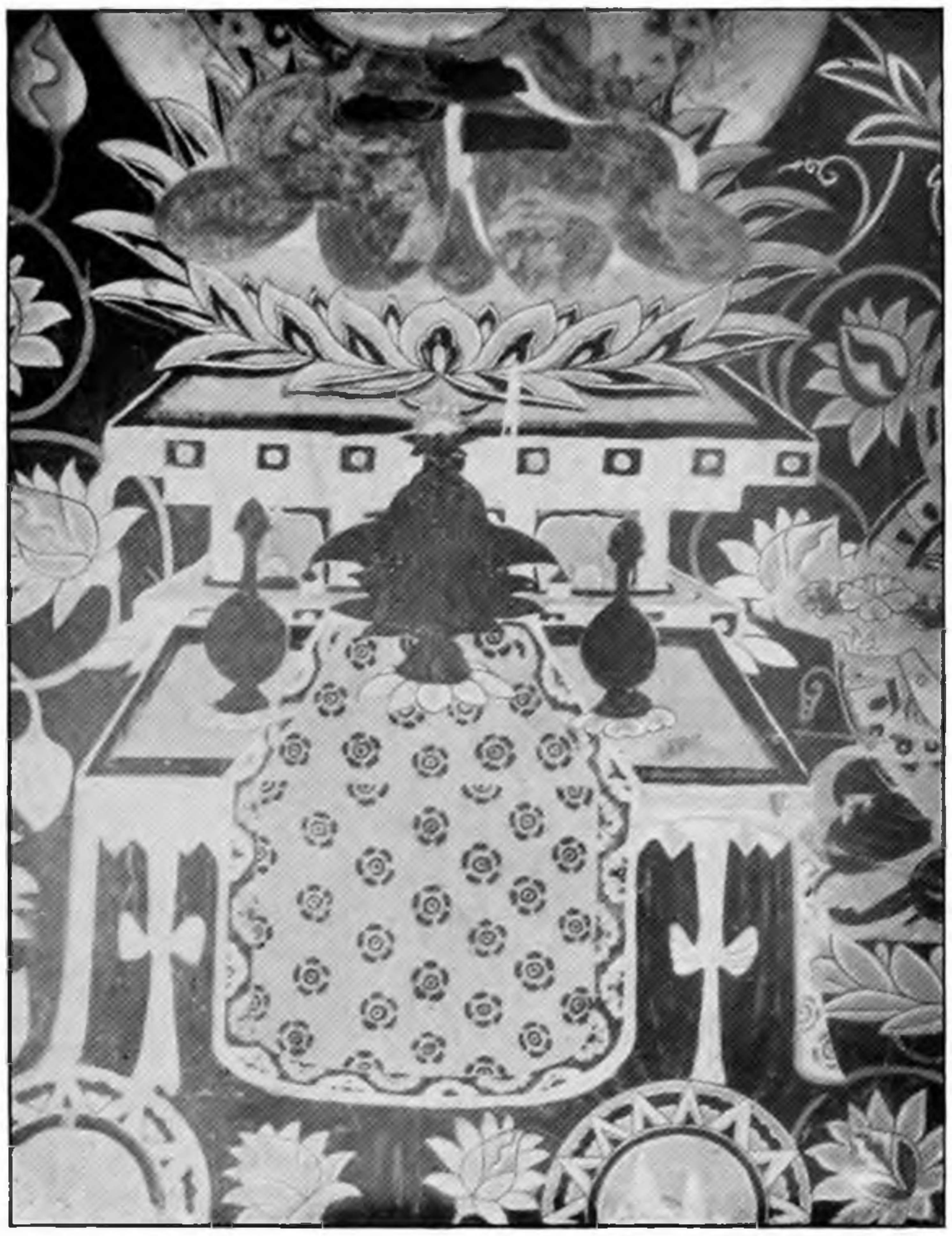
256. RUINED TEMPLES A. I, II, ARA-TAM SITE, SEEN FROM SOUTH-EAST.



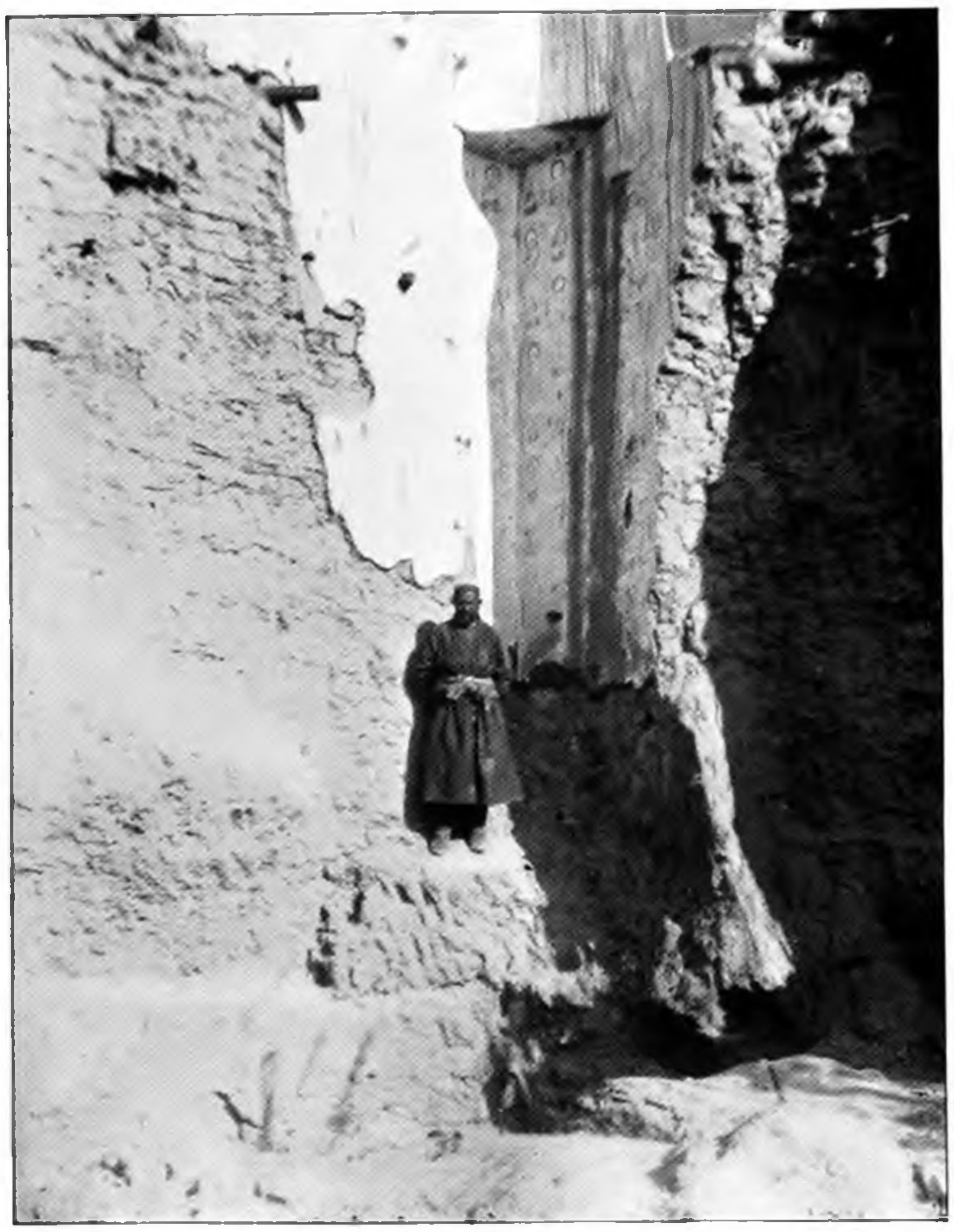
257. INTERIOR OF CAVE CELLA A. III. iii, ARA-TAM SITE.



258. NORTH WALL OF CAVE CELLA A. III. ii, ARA-TAM SITE.



259. PORTION OF TEMPERA PAINTING, SHOWING ALTAR BELOW SEATED BUDDHA, ON N.W. WALL OF ANTECHAPEL IN CAVE XVIII, WAN-FO-HSIA.



260. NORTH-EAST CORNER OF CAVE CELLA A. III. ii, ARA-TAM SITE.

winter occasionally to a depth of 6–8 inches, though it never lies for more than a few weeks. But at Bardash, only about 8 miles higher up the valley, snow was declared to cover the ground for several months each year and rain to be fairly frequent.

Clearing of shrine A. II.

The clearing of shrine A. II yielded no better result. This consisted of an outer hall about 23 feet square, half of it on a level about 3 feet higher than the rest, and of a cella, 13 feet by 14. Painted stucco fragments showed that the base running round the walls of the latter had once borne relievo images. Two square bases (Plate 47), cut from the natural clay soil which the clearing disclosed on either side of A. II, may once have borne Stūpas of small size.

Cave shrines cut into clay ridge.

The second group of ruins, shown as A. III in the plan, Plate 48, consists mainly of a series of cave-shrines cut into a ridge of gravelly clay that extends for a total length of about 400 feet from east to west, as seen in Figs. 192, 255. This ridge is completely isolated from the foot of the rocky hill chain to the north. It rises to a maximum height of 60 feet at its eastern end, where two flights of stairs once led up to its top. Into its southern face there have been cut five cellas which had their walls partly formed by the natural clay, and partly by masonry of sun-dried bricks, as seen in Figs. 257, 258, 260. Their roof, originally vaulted, is likely to have been everywhere constructed of brickwork. Each of them appears to have contained a colossal Buddha image, which was either carved mainly from the live rock or else built up in plaster which timber pieces, set into the brickwork facing of the wall behind, helped to secure.

Remains of mural paintings.

Of these cellas, which appear to have measured from about 20 to 25 feet square, the first, A. III. i, at the western foot of the ridge had its walls for the most part built of bricks and is now almost wholly destroyed. The second, as seen in Figs. 258, 260, had its walls faced with bricks, and the stucco plastering still survived on part of the north wall and the extant portion of the vaulting above it. The colossal image set up against the north wall had completely disappeared. The stuccoed surface of the wall had been painted in tempera, the surviving portions showing mainly a diaper of small seated Buddha figures, best preserved in the north-east corner (Fig. 260). The figures, about 8 inches high, were painted alternately with red and brown robes over a background of light green, the whole closely recalling the similar diaper decoration so common on the walls of the 'Thousand Buddhas' caves' of Tun-huang. The very shallow squinches set above the corners of the square walls retained traces of bold floral decoration, also in a style resembling that of Ch'ien-fo-tung.

Traces of colossal stucco images.

In cella A. III. iii (Fig. 257) it was still possible to make out the base of a colossal image and the screen at its back carved from the rock. Behind this led a narrow passage intended for circumambulation. The upper portion of the statue was probably built up of bricks thickly coated with plaster; the heavy beam which once supported the head is seen in the photograph. This also shows what little remained of the wall-painting, which in the north-east corner, on the right, was bold scroll-work in dark red and green, probably forming part of the flame border of a large vesica. In the squinches I could make out traces of divine figures in flowing drapery, mainly of bright green, probably representing Lokapālas as found in corresponding positions below the vaulting of Ch'ien-fo-tung cellas. Bands of floral decoration formed medallions around them just as there. Courses of projecting mouldings below the foot of the vaulting were modelled in clay over bundles of reed-straw, just as found in shrines at Dandān-oilik and elsewhere. Cella iv showed a similar arrangement of screen and passage behind the colossal image, here mainly carved from the rock and, as far as I could judge from the shape of the surviving mass, seated. The plaster surface of the walls had completely disappeared. The same was the case also in cella v, evidently owing to the effect of rain-water flowing down the walls from the top of the ridge. The front wall to the south had entirely fallen. From the position of the lowest moulding, still surviving below what was once the octagonal drum of the dome, it appeared that this cella was higher than the rest, as might also be inferred

from what remained of the projecting mass of rock that once formed the core of the statue; it pointed to a colossal standing figure.

Cellas on ridge A. III.

Considering the only too obvious effects of moisture on these cellas, the hope of recovering recognizable remains of relievos or more interesting relics under the heavy masses of débris that filled the interior in parts seemed too small to justify the heavy expenditure of time and labour which a complete clearing would have cost. But on the top of the ridge, which at its eastern end has evidently been occupied by a number of small structures, either shrines or monastic quarters, I had the two cellas vi and vii cleared. From a few fragments of painted plaster brought to light in vii it appeared that these, too, were places of worship. In addition to the walls shown in the plan, which probably served mainly to secure level building space, there were remains of terraces built up against the north-east end of the ridge, at a height of 20–30 feet above the level ground. These, too, may once have borne small structures.

The only ruins at Ara-tam which still remain to be mentioned are six small cellas, some only a few feet square, found perched in a line, as Fig. 192 and Plate 48 show, on little spurs jutting out from the foot of the hill directly to the north of A. III. They were found completely empty and were declared to have been searched two years earlier by Dr. von Lecoq, who had paid a flying visit to Ara-tam when on his reconnaissance tour eastwards on behalf of Professor Grünwedel's Mission. With what result I have not been able to ascertain.

Date of *Ara-tam* shrines.

My own search of the ruins had yielded no definite chronological evidence. But, in view of the close resemblance which the remains of the fresco decoration in the rock-cut cellas showed to designs familiar to me from the later cave-temples of Ch'ien-fo-tung, it appears to me highly probable that the Ara-tam shrines dated from the period of Uigur dominion (ninth–twelfth centuries), during which Hāmi is likely to have enjoyed protracted spells of peace and prosperity. It is more difficult to guess the date at which Buddhist worship had finally ceased at the site. We have seen above that at the time of Shāh Rukh's embassy (1420) Buddhism still continued to be professed at Hāmi by the side of Islām. Clear chronological evidence, such as a site definitely abandoned to the desert might have easily yielded, was not to be looked for at a place which, favoured by its abundant water-supply and fertile soil, must have ever invited continued occupation. That the advantages and facilities for archaeological work which are offered by ruins within the cultivated areas, along the south foot of the T'ien-shan and far away from the desert, have their antiquarian drawbacks also is a lesson I first learned amidst the pleasant surroundings of Ara-tam.

March from Hāmi to Toghucha.

On November 2 I left Hāmi for Turfān, after having completed the safe packing in twelve wooden cases of the additional manuscript acquisitions from Ch'ien-fo-tung, which so far had to travel in huge bags and without adequate protection. Regard for the available transport and our survey-work induced me to follow the rather circuitous high road which, for the sake of wells and some chances of grazing, keeps close to the foot of the T'ien-shan.[7] By doubling marches where

[7] The first portion of the line followed by the high road, as far as Ch'i-ku-ching (Map No. 66), lies on what must always have been the most direct route from Hāmi to Guchen ('*Posterior Chü-shih*', the later *Pei-t'ing*) and the other fertile territories along the north foot of the T'ien-shan. Whenever these were safely held by the Chinese, traffic from Hāmi towards the West is always likely to have followed this northern route during the summer months in preference to that leading via Turfān. The further portion of the high road to the latter leads over very barren stony slopes as far as Chik-tam, but offers at least halting-places with water.

Of this there is practically none now on the corresponding section of the more direct route from Hāmi to Turfān, which leaves the high road at Toghucha and strikes across absolutely barren hills and plateaus to Chik-tam; see Map II in the Russian publication of Captain Roborovsky's expedition which first surveyed it. Donkey caravans to Turfān frequently use this route in the winter. It is this route which the Chinese envoy Wang Yen-tê followed in A.D. 981; cf. Chavannes, *T'oung-pao*, 1905, p. 530, note.

Further south lies the track, quite waterless, which leads from the Shona-nōr depression south-west of Hāmi to Chik-tam. It was first followed by Col. Kozloff in 1895 and surveyed again in 1914 by M. Muḥammad Yāqūb under my

possible I managed, however, to make up for the loss of time implied by the detour and to cover the 195 miles to Pichan, the easternmost of the Turfān oases, in seven days. The first of these brought me to the small oasis of Toghucha, the San-p'u (' third walled village ') of the Chinese, some 33 miles from Hāmi (Map No. 69. D. 4, 5). On the way were passed the village oases of Sumkāgho and Astīne (Map No. 73. A. 1), or T'ou-p'u and Êrh-p'u according to their Chinese designations. Both have walled enclosures now in ruins which were held by the Chinese as advanced posts, while defending Hāmi against Yāqūb Bēg's troops and the Tungans during the last Muhammadan rebellion. At Sumkāgho I noticed the first of those *kārēz*, or irrigation channels, carried underground by means of a line of wells which serve to catch the subsoil drainage below the gravel glacis of the mountains, and which at the present day play so large a part in the cultivation of the Turfān region. The extension of this remarkable system of irrigation, said to have been introduced from Īrān, to the main oasis of Hāmi is likely to be a mere question of time and may yet lead to a great increase of its agricultural resources.[8]

First Kārēz.

A two days' halt enabled me to visit from Toghucha two ruined sites of which information had been received by me at Hāmi. One of these, close to the east of the hamlet of Ilikul and about three miles to the south-west of Toghucha (Map No. 69. D. 5), proved to comprise a series of Buddhist temples and caves which had been examined and partially excavated by Professor Grünwedel in the course of two stays made here in September, 1906. In view of the careful description he has given of the ruins and of the finds which rewarded his clearings,[9] it would serve no useful purpose to record here my own hurried observations. It may suffice to mention that the remains of fresco decoration left exposed in some of the shrines showed very close resemblance in style to those noted at Ara-tam. The conclusion I came to at the time that the Ilikul temples also dated from the Uigur period has since been fully confirmed by what Professor Grünwedel's published report states about his finds of Uigur and Tibetan manuscript remains in the north-eastern group of the ruined shrines.[10] It may be added that the Ilikul temples occupy loess terraces overlooking the debouchure of a limpid stream which rises in springs about a mile to the north-east and provides the main source of irrigation for the large village of Lapchuk to be presently mentioned. The site is made singularly attractive by this lively rivulet and the verdure with which some springs issuing immediately below clothe a shallow depression between the ruins. There seems to me little doubt that local worship had selected this spot just because it marks the *su-bāshi*, or irrigation-head, for the fertile village lands of Lapchuk.

Ruined temples of Ilikul.

November 3 was devoted to a long excursion which showed me a good deal of interesting ground in the broad trough-like valley descending to the south of Toghucha. Flanked on either side by flat gravel plateaus, this valley carries down the streams coming from Toghucha and the vicinity of Ilikul, and its lower portion contains the long-stretched village tract of Lapchuk and Kara-döbe, the largest fertile area in Hāmi territory after the main oasis. Within a mile or so from the high road at Toghucha there rises on a low stony ridge a tolerably preserved domed structure, measuring about 30 feet square outside, which on closer inspection proved to have served once as a Buddhist shrine. It consists of a square cella having its entrance from the east and of an enclosing passage with its doorway on the west. The interior was found completely bare, but the plastered

Buddhist cellas below Toghucha.

instructions. Of a fourth route, marked in the Russian Trans-frontier map from native reports as leading from Shona-nōr to Dēghar in the south-west corner of the Turfān basin, R. B. Lāl Singh discovered traces on his surveys of 1915 in the wastes of the Eastern Kuruk-tagh. Once used by hunters after wild camels, it has become quite impracticable, since the few salt springs on it have dried up.

[8] For a good account of the Kārēz irrigation of Turfān and its relation to questions of desiccation, cf. Huntington, *Pulse of Asia*, pp. 307 sqq.

[9] Cf. Grünwedel, *Altbuddh. Kultstätten*, pp. 217–23.

[10] Cf. Grünwedel, *loc. cit.*, p. 223. I may add here that I noted in the Ilikul ruins a size of bricks identical with that used in the Ara-tam temples I and II; see above, p. 1152.

ceiling of the domed cella still showed traces of a painted diaper, with rows of small Buddha figures alternately in red and brown robes. Shapeless piles of masonry of sun-dried brick, extending in a line to the south, looked as if they marked the position once occupied by a row of small Stūpas. Two miles further down by the road leading to Lapchuk I came upon another small ruin known as the 'Tāzganchük Gumbaz'. Just below it flows the rapid, clear stream which carries the united waters from Toghucha and Yār-bāshi down to the lands of Kara-döbe.[11] The cella measures here 5 feet 3 inches square inside and has an enclosing passage, 2 feet wide, entered from the east.

Buddhist ruins near Lapchuk.

From this point downwards the gravel-covered depression widens considerably. In its middle meander the two canalized beds which take the waters from Toghucha and Ilikul down to the lands of Kara-döbe and Lapchuk respectively.[12] Near the point where the two streams would naturally unite a low spur called Tuma bears a line of tiny cellas of the type already described. These I had to leave unvisited from want of time. Another three miles' descent from Tāzganchük brought me to a group of conspicuous ruins within sight of Lapchuk village. One of these, marked I in the plan (Plate 49. B) and seen in Fig. 261, consists of a central cella, measuring 9 feet by 10 within, and flanked on either side by a smaller cella. All three originally carried domes, but of these only the one covering the cella on the west has survived. All three cellas had their entrances on the south, the central one being approached through a kind of vaulted anteroom which gives access to an enclosing passage, also vaulted, 6 feet wide. On the walls of this passage there were some traces of fresco decoration, purposely effaced under a fresh cover of plastering or whitewash. The whole structure occupied a terrace of what seemed natural clay cut down on the sides, and showed signs of having been occupied as a habitation after it had ceased to be a place of Buddhist worship.

Temple cella on double base.

About 40 yards to the west of this structure stands a conspicuous temple cella on a high double base, marked II on the plan. The cella, about 10 feet square within, still retains most of its dome, rising to a height of about 15 feet, but broken over the entrance on the south. The bricks used here measured either $15'' \times 7\frac{1}{2}'' \times 3\frac{1}{2}''$ or $12'' \times 8'' \times 4''$. The cella occupies the top of a base 14 feet high, built of stamped clay, which, again, rests on a broader base, 5 feet high, of what looked like natural clay. The approach lay over a flight of stairs, now mostly broken, which led up from the south over a ramp partly vaulted. Another shrine could be recognized in a completely ruined building that measured about 63 feet by 53, situated *circ.* 200 yards to the south. Here, too, a natural clay terrace had been converted by cuttings into a base. Several smaller ruins which I had no time to visit were sighted on the gentle gravel slopes to the east and north-east.

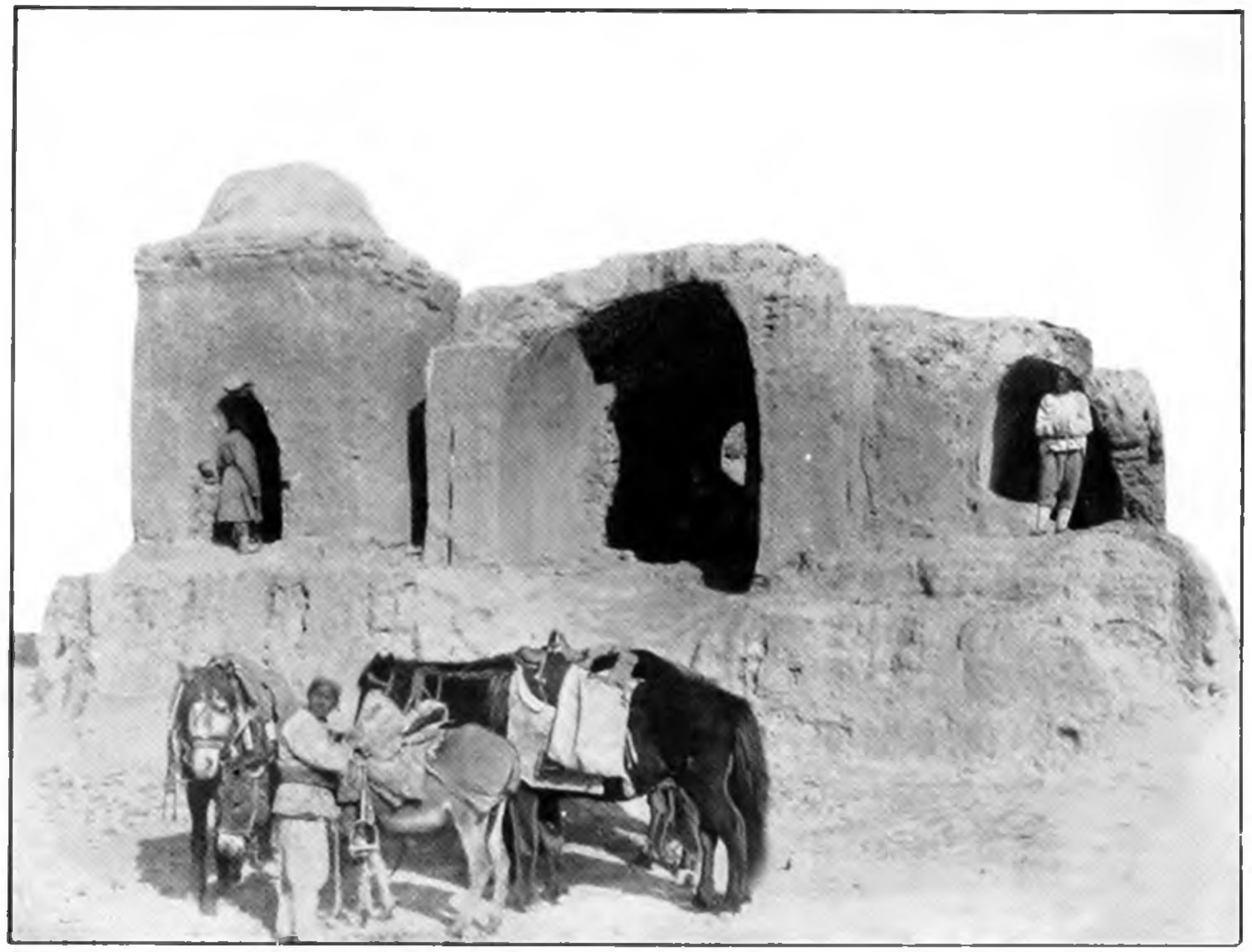
Ruined town walls of *Lapchuk.*

To the south-west of the ruins I, II just mentioned there extends an area of eroded clay terraces, covered from a distance of about 800 yards onwards with Muhammadan tombs and small vaulted 'Gumbaz' of the type usually met with in modern Turkestān cemeteries. Beyond this area rise the ruined walls of a small fortified town, forming a rectangle approximately orientated. The walls are built of stamped clay over parts of a high clay terrace which, as seen in Fig. 262, have been utilized for a natural rampart to raise the height of the circumvallation. The faces of the south and east walls measure about 185 and 120 yards respectively. Gates can be distinguished near the south-west and north-east corners. At the latter rises a massive square tower to a height of about 40 feet, seen from

[11] The name *Tāzganchük* (*sic*; the form *Tazgan-chük* of the map is erroneous) is likely to be derived from the stream. *Tāzgan*, also *tāzgun*, *tāzghun*, is a common Turkī designation for streams flowing rapidly and liable to heavy floods; *-chük*: *-chuk* is a well-known adjectival suffix.

[12] The map, owing to the smallness of the scale, shows the two streams as flowing in one bed, as they undoubtedly would, did not irrigation interests necessitate the artificial maintenance of two separate channels side by side. On the west side of the ruined town of Lapchuk the stream from Ilikul is carried in a conduit across the one from Toghucha, which serves to irrigate Kara-döbe (a detail overlooked in the plan, Pl. 49. B).

P. 1156



261. BUDDHIST TEMPLE I, NORTH OF LAPCHUK, HĀMI.

262. WALLS OF RUINED TOWN, LAPCHUK, WITH TOWER AT NORTH-EAST CORNER, SEEN FROM INTERIOR.

263. GROUP OF VILLAGERS ANTHROPOMETRICALLY EXAMINED AT ARA-TAM, HĀMI.

264. GROUP OF VILLAGERS ANTHROPOMETRICALLY EXAMINED AT YĀR-KHOTO, TURFĀN.

265. RUINS OF VAULTED DWELLINGS ALONG NORTH-WEST WALL AND IN WEST CORNER OF CHONG-HASSĀR, TURFĀN, SEEN FROM NORTH-EAST.

266. RUINS OF BUDDHIST SHRINE AND OF DWELLINGS ALONG SOUTH-WEST WALL OF CHONG-HASSĀR, SEEN FROM NORTH.

within on the right of Fig. 262. Its top bears brickwork manifestly of a later date. Except for a decayed mosque near the south-west corner, the interior of the circumvallation is entirely clear of structural remains above ground. But small terraces of natural clay, divided by a network of narrow sunk alleys, evidently once served as basements or foundations for dwellings. On these basement terraces I frequently noticed round holes, 2 to 3 feet in diameter, which manifestly had been excavated for the purpose of storing grain, etc. The narrow alleys dividing these little *insulae* must also have been excavated from the hard clay soil. But this became fully intelligible to me only after I had seen the streets similarly cut into the ground, but to a greater depth and wider, at the site of Yār-khoto, the ancient Turfān capital (Fig. 273). Close to the north and west walls passes the stream from Ilikul which serves to irrigate the fields of Lapchuk. Beyond this stretches the area already referred to which has been used as the burial-ground of the village, evidently for a prolonged period. Close to the south wall are the homesteads of Lapchuk scattered among fields.

Lapchuk the *Na-chih* of Chinese records.

I did not succeed in obtaining any useful local information about the ruined town. But from such indications as the badly decayed state of the walls, in spite of very massive construction, and the total absence of habitations within could furnish, it appeared to me very probable that the circumvallation dated from a period preceding, though not, perhaps, by a long time, the first introduction of Islām. The existence of this old fortified town and of the ruined Buddhist shrines north of it, which probably belong to the Uigur period just like those of Ilikul, has a special historical interest in view of the evidence which recent researches of Professor Pelliot have brought to light as to the mention of Lapchuk by early Chinese records under the name of Na-chih 納職.[13] It appears from the texts which he has discussed with much critical care and learning that Na-chih, mentioned by the T'ang Annals as a sub-prefecture in A.D. 630 and located by other Chinese texts, including one of the early ninth century, to the west or south-west of Hāmi,[14] was founded in the sixth century A.D. as a colony of 'barbarians' who had emigrated from Shan-shan, i.e. the present Lop region. M. Pelliot has further demonstrated, in what appears to me a very convincing fashion, that the Chinese *Na-chih*, in accordance with certain rules of early Chinese phonetics, is meant to reproduce an older form **Lop-chuk*. This itself seems made up of *Lop*, the indigenous name of Shan-shan, the antiquity of which is proved by the *Nob* of my Tibetan documents from Mīrān and Hsüan-tsang's *Na-fu-po*, and the well-known Turkī suffix *-chuk*. Thus the name Lapchuk presents itself as an appropriate designation for the old colony founded in Hāmi territory by Lop emigrants.

Village lands of Lapchuk.

The antiquity proved for the settlement of which the ruined town marks the northern extremity justifies my adding here some notes on what I was able to observe about the ground visited on my ride further down the valley. The homesteads of Lapchuk, counted at over a hundred, lie scattered among gardens and luxuriant orchards, which stretch for a distance of about a mile below the old site. The fields belonging to the village extend for some three miles further down between the flanking gravel plateaus; but most of this large and carefully terraced area of cultivation is now sown only every third year, as the available water was declared to be insufficient for irrigating the whole. It seemed as if want of adequate labour for tilling and manuring might also have something to do with this present limitation.

[13] See Pelliot, *Le 'Cha tcheou tou fou t'ou king'*, *J. Asiat.*, 1916, janvier-février, pp. 117 sqq.

[14] The *Yüan ho chün hsien t'u chih*, published between A.D. 806 and 814, places the sub-prefecture of Na-chih 120 li to the south-west of I-chou or Hāmi; see Chavannes, *T'oung-pao*, 1905, p. 532 note.

On the other hand, the important text No. 917 among my Ch'ien-fo-tung manuscripts, as quoted by M. Pelliot, when describing the sub-prefecture of Na-chih and its origin, indicates its position as 320 li to the west of I-chou. The bearing here given is approximately correct, as a reference to Maps Nos. 69, 73 will show. But the distance is manifestly exaggerated, as it is less than forty miles by the high road from Hāmi town to Lapchuk. In the other notice quoted by M. Chavannes the distance given seems to come closer to reality, but the south-west bearing is wrong.

Extensive cultivation of *Kara-dŏbe.*

Beyond, where the valley widens out somewhat, the big village area of Kara-dŏbe was entered, stretching away to the south-west for a distance of probably close on ten miles. Its stream, coming from Toghucha, carried here far more water than where I had seen it above the ruined town; the increase in volume is due to the abundance of springs which come to light in or near its deep-cut bed where it passes through the lands of Lapchuk. For nearly four miles the road led through rich gardens and orchards, and the number of farms looked quite double that of Lapchuk. I had a very cordial welcome at Kara-dŏbe, and found the villagers, far off from the high road and unaffected by Chinese ways as they are, communicative enough. But they could tell of no old remains apart from two ruined watch-towers. These could be sighted to the south and south-east, far away in the distance, rising on long desert spurs which overlook the widening valley. That the latter descends towards the Shona-nōr depression seemed probable from the look of the ground. That no water from this side reaches so far now is certain. Yet the existence of those conspicuous towers points to routes through the desert by which raids, etc., may have once been practicable from the south.

OBJECTS EXCAVATED AT ARA-TAM RUINS

A. 001. Fresco fr. from edge of wall. On white ground are two ribbons, faint pink with vague blue markings, outlined in black; one ending in spiral. Much faded. 6″ × 3½″.

A. I. 001–2. Stucco relief frs.; two palmette finials of five leaves; upper three straight, two lower spiral. Green with chocolate edging; round edge, traces of red background. Lower part of 002 broken off, and colour mostly lost. Soft grey clay. *001,* 3″ × 2¼″; *002,* 2½″ × 2″.

A. I. 003. Stucco relief fr. Jewel orn. with round central boss surrounded by floral border; remains of green paint. Soft grey clay. Diam. 1½″.

A. I. 004. Stucco relief fr. Medallion from head-dress, covered with intricate relief pattern of spiral lines; plentiful traces of red; much worn. Soft grey clay with upright wooden support. 2¾″ × 2½″.

A. I. 005. Stucco relief fr. Tassel; traces of yellow paint. Soft grey clay. 2⅜″ × 1⅛″.

A. I. 006. Stucco relief fr. Part of border. Edge blue; front shows on blue ground, scale pattern outlined in red on white; traces of vermilion in corner. Broken and worn. Soft grey clay facing over red clay and fibre backing. 3½″ × 2″.

A. I. 007. Stucco relief fr. of drapery; folds curve to L. and R., blue; down centre a heavy perpendicular overfall of red. Colour much lost. Soft grey clay over red clay and fibre backing. 6″ × 5″.

A. I. 008. Stucco relief fr. Legs from loins downwards of human fig. in profile to L., R. knee raised as in climbing. From large vesica, the flame border of which shows below feet of fig. Loin-cloth green, lower drapery red with black markings to accentuate moulded folds; shoes pink. Double border of flames, inner green, outer red. Drab clay. 7″ × 4″. Pl. CXXXIX.

A. I. 009. Stucco relief fr., showing three tricoloured ribbons (blue, red, and green) interlaced; only traces of colour. Soft grey clay over red clay backing. 4″ × 2½″.

A. I. 0010. Stucco relief fr. Top-knot (?) from head-dress resembling Mi. xi. 003; blue. Soft grey clay on red clay and fibre backing. 3″ × 4½″.

A. I. 0011. Stucco relief fr. End of drapery fold; blue. Soft grey clay over red clay and fibre backing. 2″ × 1¾″.

A. I. 0012. Stucco relief fr. Edge of vesica (?); spiral pattern in green and red. Soft grey clay. 1¾″ × 1½″.

A. I. 0013. Fresco fr. showing on white ground ends of looped or floating scarves; copper-green outlined black, or olive lined with blue. Adjoining latter are four toes of human foot, white outlined black, and orange at tips, roughly drawn. Traces of orange and red on edge below (unintelligible), and of scattered flowers on background. Much worn. 7″ × 5″.

A. II. 001. a–b. Stucco relief frs. *a.* L. side-lock of hair-dress of human fig.; cf. Mi. xi. 003. Black paint. 3½″ × 2″. *b.* Top-knot of same; traces of black paint. Soft red clay plentifully mixed with fibre. 3½″ × 3″.

A. III. vii. 001. Frescoed slab of soft red clay and fibre, wedge-shaped in section; painted on each side with coarse floral scroll-work in red and green, outlined black. Broken both ends. 1′ × 6″ × 1¾″ to ⅝″.

Section IV.—VISITS TO RUINED SITES OF TURFĀN

Importance of Turfān sites.

Six rapid marches from Toghucha by the high road brought me on November 10 to the oasis of Pichān, the easternmost of the fertile tracts comprised in the Turfān depression. The great importance attaching to this region from the point of view both of history and of geography has been known for a long time. Since the visits of Russian explorers first revealed the abundance of its ruins, the old sites of Turfān have acquired exceptional interest for all students of the ancient civilization of Central Asia, owing mainly to the prolonged and very fruitful archaeological labours which a succession of German expeditions under Professors Grünwedel and von Lecoq carried out there between 1902–7.

Limitation of work at Turfān.

Since my tasks further west would not allow me to spare for Turfān more than a few weeks at the utmost, while I knew its ruined sites to be both numerous and extensive, I had to arrange the programme of my visit on lines very different from those I was accustomed to follow elsewhere. It could not be my object to attempt to supplement the protracted labours which the German savants had carried on, with all the advantages of ample time and thorough local experience, by excavations at sites that might not yet have been fully exhausted. It appeared far more useful that I should endeavour, within the limits of the available time, to familiarize myself in the first place with those peculiar physical conditions and geographical aspects which make this region the reflex, as it were, on a small scale of the whole Tārīm Basin and have determined the essential features of its historical past. For this study our topographical survey work obviously offered the best opportunity. In addition, visits to the different sites were to furnish me with some direct knowledge of the constructive peculiarities of the ruins, the art remains left *in situ*, and anything else that might help me to understand better the significance of the Turfān finds and to profit by them for the interpretation of my own.

Surveys in Turfān basin.

In accordance with this programme I succeeded in visiting in the course of less than three weeks all the ruined sites which Maps Nos. 54, 59 show from the extreme south-east end of the Turfān basin to Yār-khoto, its ancient capital, in the west. The surveys carried out side by side with these tours, and pushed by R. B. Lāl Singh far beyond the inhabited area both to the north and the south, allowed this interesting area to be mapped on a scale far more accurate and detailed than had been done previously. Of the many useful observations which I was thus enabled to gather of the characteristic physical and economic conditions prevailing in the Turfān basin some indications will be found in my Personal Narrative.[1] The experience gained on these tours proved of the greatest help later in planning the archaeological labours which my prolonged stay in the Turfān region during the autumn and winter of 1914–15 made it possible to carry through. But the very fact that this second visit covered a period of close on four months, and was also supplemented both before and after by visits to ground which, though outside the Turfān depression, is yet closely connected with it in geography and history, will explain the restriction which must be imposed upon my present record.

Surveys and explorations of 1914–15.

It is obvious that it would be of little scientific utility if I were to discuss here the geographical and antiquarian observations of a general kind which my rapid tours of November, 1907, allowed me to gather, without taking into account the far more abundant and exact data bearing on the past and present of Turfān which my surveys and explorations of 1914–15 have yielded.[2] The proper

[1] See *Desert Cathay*, ii. pp. 354–63, *passim*.

[2] The great addition made to my previous materials is best illustrated as regards topography by the fact that our stay in 1914–15 permitted the execution of a detailed map comprising the whole of the inhabited portions of the Turfān basin, on the large scale of one inch to the mile, based upon a continuous series of accurately observed levels. The separate publication of these surveys is contemplated by the Royal Geographical Society.

elaboration of these results will take time, and it is only in the proposed detailed report on my third expedition that I can hope to present them. To this publication I must accordingly leave the record of the observations concerning the geography and history of the Turfān region in general that I was able to make, and the discussion of the many interesting and complex questions to which they give rise. In the present place I shall limit myself strictly to a record of the modest exploratory work I found occasion to carry out at a couple of smaller sites, and to the information needed as regards the origin of certain antiques which were acquired elsewhere.

March from Pichān to Lukchun.

The hope of being able to study topographical and archaeological facts which might throw light on the subject of desiccation, as important in Turfān territory as in areas of ancient occupation within the Tārīm Basin, induced me to start my tour at the south-eastern end of the basin. There Captain Roborovsky's map marked the ruins of *Chong-hassār*, the 'Big Castle', also locally known as *Hassā*[*r*]-*shahri*, not far from the extreme eastern end of the marshy salt-lake bed which forms the deepest portion of the Turfān depression and gathers whatever is left of its surface drainage (see Map No. 59. c. 2). The ruins were declared by my Pichān informants to be situated on ground which was now wholly desert, and my archaeological predilection for the latter helped to decide me to make a start there. Our march on November 13 led down the barren narrow valley, where the waters of the Pichān tract disappear between bare clay ridges and drift-sand, and brought me to the flourishing oasis of Lukchun, watered mainly by the stream coming from Lamjin. Under the name of *Liu-chung* 柳仲 it figures already in Han times as the seat of the 'Chang-chih' of the Western countries and as a chief foothold of Chinese power.[3] Barometrical readings indicated for Lukchun an elevation of only some 50 feet above sea-level.

Change in irrigation methods.

For a description of the interesting ground crossed next day on our march to the south-west I must refer to my Personal Narrative.[4] Here it will suffice to mention that irrigation from newly constructed Kārēzes is steadily replacing the precarious cultivation formerly carried on with the water that the canals of Lukchun could bring down in favourable years to this outlying area. The immediate cause of this change, which is proceeding in most of the Turfān settlements, is certainly the increased pressure of population, following the re-establishment of peace and prosperity since the Chinese re-conquest. But since Kārēz construction is admittedly a modern innovation in the Turfān region, not dating back further than the end of the eighteenth century at the earliest, we can account for the far larger population in ancient times, to which a variety of archaeological and historical indications point, only by assuming that the water-supply available from surface drainage in former periods was more plentiful than it now is.[5]

Evidence of desiccation about *Bēsh-tam*.

Clear evidence of the desiccation here implied, whatever its cause, period of commencement, or duration, was forthcoming on the approach to the site. At the farm of Bēsh-tam, some seven miles from the southern edge of continuous Lukchun cultivation, the last small patches of Kārēz-irrigated land were left behind. Beyond we passed fields long ago abandoned and overrun by thorny scrub of the desert, and then crossed a shallow bed in which the water of the Lukchun canals, when left unused in the winter, endeavours to make its way down to the terminal lake-bed. On account of evaporation and absorption in the soil, no water could now ever reach so far down during the spring, when it is most needed in the oasis, or during the terrible heat of the Turfān summer, unless, perhaps, at the time of quite exceptional rain-floods from the distant mountains. To the south of this temporary overflow-bed there stretched a wide sandy plain with plentiful thorny scrub and small tamarisks growing amidst rudimentary dunes. Wherever the ground was left clear of drift-

[3] Cf. Chavannes, *T'oung-pao*, 1907, pp. 169, 211.

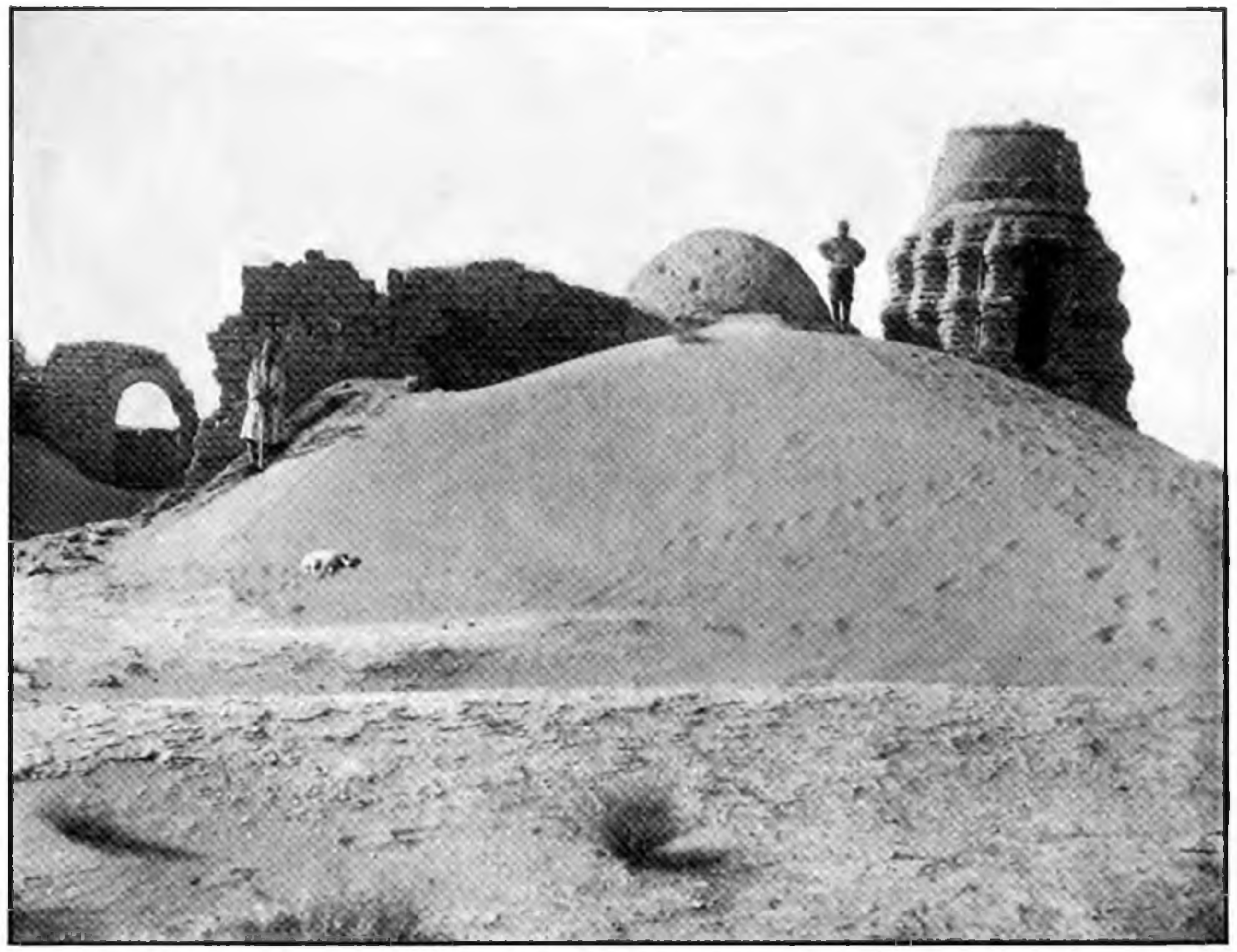
[4] See *Desert Cathay*, ii. pp. 355 sq.

[5] For a lucid discussion of the question of desiccation as presented by the conditions observed in the Turfān region, cf. Huntington, *Pulse of Asia*, pp. 309 sqq.

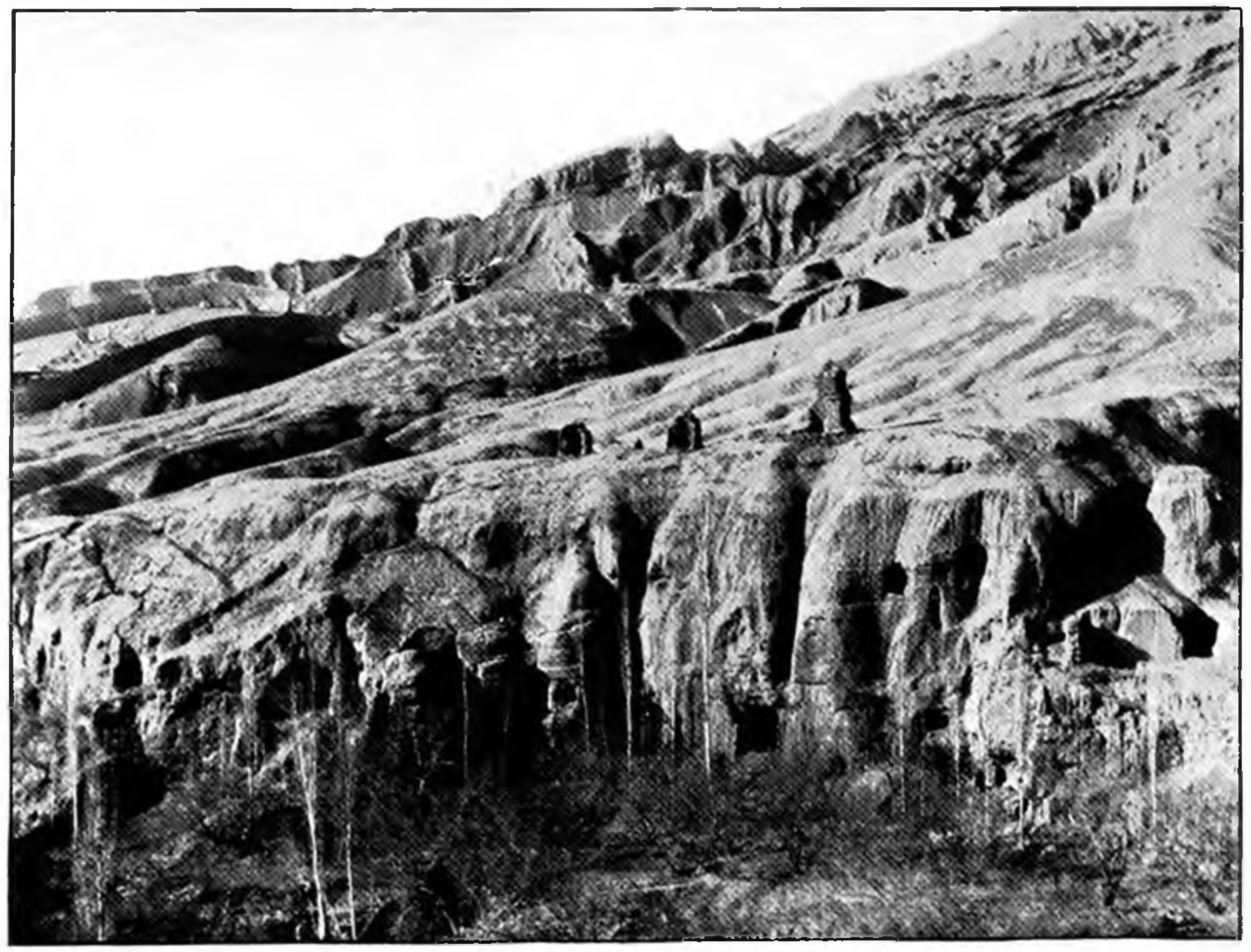
267. FORT AND KEEP OF CHONG-HASSĀR, SEEN FROM NORTH-EAST ACROSS OUTER WALLED ENCLOSURE.

268. RUINED KEEP OF CHONG-HASSĀR, SEEN FROM WEST.

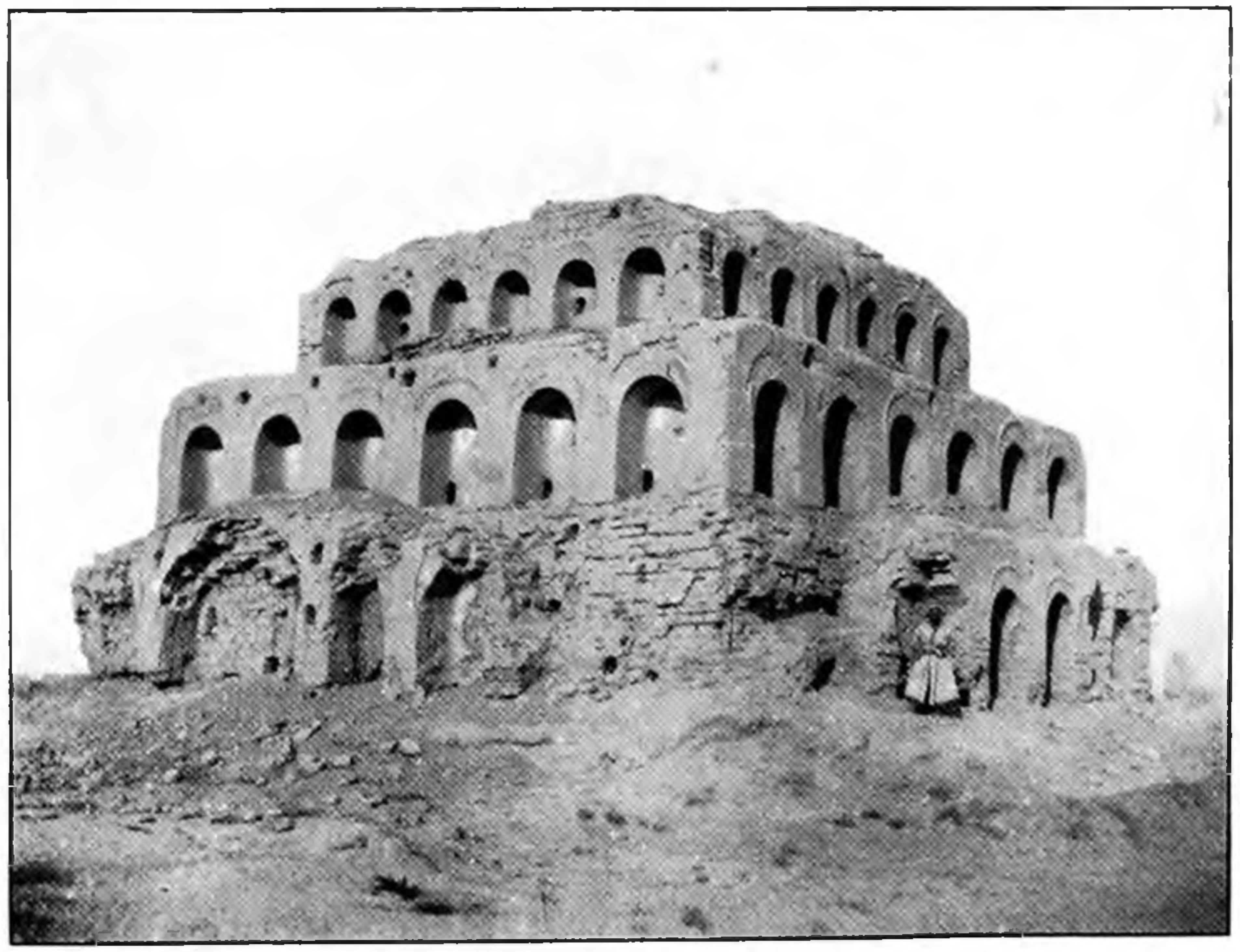
269. RUINED SHRINES I-III, KICHIK-HASSĀR, SEEN FROM SOUTH.



270. RUINED STŪPA AND SHRINE I, KICHIK-HASSĀR, SEEN FROM EAST.



271 CAVES AND SHRINES AT LOWER END OF TOYUK GORGE, SEEN FROM EAST.



272 RUIN OF TERRACED BUDDHIST SHRINE AT KARA-KHŌJA, TURFĀN, SEEN FROM SOUTH-EAST.

sand, incipient wind-erosion had cut up the hard clay into small trenches and Yārdangs from 1 to 2 feet in height. They all ran approximately west to east, the prevailing direction of the violent gales which blow across the Turfān basin in the spring and carry their erosion products to the great ridges of dunes bordering its lowest portion on the east, as seen in Map No. 59. D. 1, 2. The walls of Chong-hassār now were seen in the distance, and beyond a glittering line of white marking the salt-encrusted lake-bed along the foot of the Chöl-tāgh.

The distance from Bēsh-tam to the ruins proved to be only six miles, and with water relatively so near, plentiful camel-grazing close at hand, and fair shelter for the diggers, the site was by no means a place very trying to stay at, as it had been described by my informants of Pichān and Lukchun. The desert around seemed, indeed, petty and of a distinctly mild type; yet at the same time it left no doubt as to the great change which must have come over this ground since the site was abandoned. This comprises the remains of a small oblong fort and an outer enclosure adjoining, also walled but of irregular shape, as seen in the plan, Plate 50. The whole occupies a low terrace of natural clay and is built of sun-dried bricks. Within the north-east corner of the oblong fort, which measures about 200 feet by 150 outside, there rises on higher ground the very massive keep-like structure seen in Fig. 268 and partially also in Fig. 267. Site of *Chong-hassār.*

But the feature most striking to me at first sight was the perfect rabbit-warren of small vaulted chambers and casemates which filled most of the interior of the fort (Figs. 265–7) and crowded also against the walls of the outer enclosure. In many places these chambers had been built in irregular tiers one above the other, and the débris of sun-dried bricks from those above choked the entrances, and often the interior too, of the lower rooms right up to their vaulting. The length of the rooms varied from 10 to about 16 feet, with a width from $6\frac{1}{2}$ to $8\frac{1}{2}$ feet. It was easy to recognize here features of construction peculiar to Turfān and still plentifully to be seen in its existing towns and villages. These vaulted rooms, known by the designation of *kemer* and built on the lower floors of the houses, are resorted to by rich and poor alike for protection from the excessive heat of the summer. Besides giving shelter from the violence of the dreaded winds of the spring, they make also comfortably warm quarters for the cold nights of the winter. The use of vaulting is widely spread throughout the Turfān oases owing to the scarcity of timber, the cheap and convenient Toghrak of the Turkestān oases adjoining the Taklamakān being wholly absent from this ground. The principle of vaulting employed in both old and modern structures of Turfān is that of the true arch, but with the bricks usually placed lengthwise along the plane of the arch and often in courses diverging from the vertical. This expedient is obviously resorted to in order to save the need of centring over a wooden framework.[6] Considering that at Chong-hassār the depression, as determined by readings taken with a mercurial barometer, is about 360 feet below sea-level, the summer heat of the place must be exceptionally great, and this sufficiently explains the exclusive use of vaulted rooms for quarters. Vaulted chambers and casemates. Use of vaulting in Turfān.

The structure which first attracted attention, apart from the massive keep already referred to, was a small Buddhist shrine, built against the south-west wall of the oblong fort (marked *i* in plan, Plate 50) and nearly facing the gate that led into it from the outer enclosure. Fig. 266 shows it on the right, together with ruined quarters along the south-west wall as seen from the north. The shrine comprised a small cella, measuring $8\frac{1}{2}$ feet by $6\frac{1}{2}$ inside, with an enclosing vaulted passage about 3 feet wide, and a kind of anteroom to the north-east about 19 feet long and 4 feet wide. The cella walls, about 3 feet thick, still rose to over 14 feet in height. The outside walls of the Ruined Buddhist shrine.

[6] I found exactly the same method of construction employed in modern and mediaeval buildings of Sistān, and for identical reasons. The terminal basin of the Helmand reproduces various characteristic physical features of the lowest portion of the Turfān basin, though on a bigger scale.

enclosing passage were broken much lower down, and its vaulting seems to have sprung from a height of 7 feet or so only. The cella and anteroom had been dug into, but not completely cleared, and information received at Lukchun pointed to this having been done during the flying visit which one of the German expeditions had paid to the site. Fragments of painted stucco, evidently from the cella walls, were found on clearing an approach through small rooms on the east, where they had been evidently thrown out in the course of this operation or possibly by subsequent native searchers.

Decorative remains from shrine.

Both the cella and the anteroom retained a layer of what appeared to be undisturbed débris, and from this careful clearing brought to light more broken pieces of wall-painting and fragments of stucco relievos, showing small seated Buddha figures and evidently once forming part of large vesicas. The outlines of three such vesicas could still be traced on the cella walls by remains of projecting stucco mouldings. Fragments of large stucco figures in the shape of broken hands, fingers, etc., also emerged. All these will be found described in the List at the end of this section.[7] Among the fresco pieces H. A. 009; i. 0021, which represent a dancing child and the torso of a Bodhisattva respectively, are produced in Plate XII. One of the many relievo fragments, a well-modelled hand about life-size, is shown in Plate CXXXIX.[7a] Numerous small appliqué Buddha figures in relief were found in the south-east passage, which had not been disturbed, and evidently belonged to the decoration of its walls; these in places also retained traces of fresco work. A thick layer of reed-straw embedded there under débris suggested that the shrine, after its abandonment, had been tenanted for a time, perhaps by graziers, after the fashion illustrated by ruins at the sites of Niya, Lou-lan, and Mīrān. The large linen fragment, H. A. i. 0023, though much decayed, shows on either side traces of a standing Bodhisattva figure painted over a heavy white slip, a technique apparently common among Turfān pictorial remains. The pattern of the silk brocade fragment, H. A. i. 0031 (Plate CXII), with its large circular panels suggests 'Sassanian' style.

Remains of Uigur manuscripts.

It may be added that, besides two pieces of painted stucco (H. A. 006, 0016) with lines of poorly preserved Uigur writing, there were found several small pieces of Uigur paper manuscripts, including the lower portion of a roll (H. A. i. 4) as well as two tiny fragments of Chinese text. These relics clearly show that worship at the shrine had continued down to the Uigur period, and to this we may safely attribute also the remains of its decoration that were recovered. That the same conclusion applies to the site as a whole was demonstrated by the results of the clearing effected at a consolidated refuse-heap which filled a room (ii) adjoining the south-west wall and close to the west corner of the fort (see Fig. 265). It evidently had lost its roofing early and been used as a dustbin, after the manner observed in the Mīrān fort. Among masses of reed-straw and stable refuse there emerged here eighteen fragmentary papers in Uigur script, all evidently letters or documents, as shown by the cursive writing and, in one or two, by seal impressions in red paint. The clearing of thin rubbish layers on the floor of other upper-story dwelling-rooms along the face of the same wall yielded no finds. Nor was any discovery of interest made when excavating a small room near the north-west wall and a larger vaulted chamber in the north corner of the fort, both of which were filled deeply with débris and drift-sand. This did not encourage hope of an adequate return for the great sacrifice of time and labour which the clearing of the whole of these vaults and cellars would involve. Fire-places were observed only in some of the upper rooms which evidently were tenanted mainly in the winter.

Uigur documents from dustbin.

The massive ruined pile iii, which occupies the east corner of the fort and is seen in Fig. 268, was at first puzzling in its character and structural features. On the much-broken north-west face

[7] The finds made in the anteroom and on clearing the rooms adjoining it are marked by H. A.; those from the cella and enclosing passage are distinguished by H. A. i.

[7a] See H. A. i. 0015, Pl. CXXXIX.

there were five openings like big niches, and to these corresponded a series of vaulted passages on the south-east which, however, were almost completely filled with débris. Huge masses of fallen brick masonry made the examination of the interior altogether very difficult. It was only after experimental clearing in certain parts and continued study that it became possible to recover the plan of the structure in its basement story, as presented in Plate 50. The outer walls, which on the south-east face, where their foot is less encumbered by fallen masses of débris, still rise to a height of 24 feet, have everywhere a distinct slant inwards. They are built of bricks, 18″ × 8″ × 4″ in size and fairly hard, some being partially burned. The wall facing south-east has a thickness of 6 feet 4 inches, while the longer one to the south-west measures in its unbroken portion fully 7 feet across. The whole structure appears to have formed at its base a rectangle of 62 feet by 53 outside. The basement story, which alone is still partially standing, contains within a central vaulted hall, about 11 feet wide and close on 40 feet long, running from south-west to north-east and evidently once provided with an entrance from the former side. On each of the long sides of this hall lie five narrow chambers, measuring about 15 feet in length and 4 feet 2 inches across. They are vaulted at a height which could not be determined exactly, as the floor could nowhere be reached through the heavy débris within the available time. Vaulted openings, with their top some 3 feet below the line from which the vaults of the side-chambers spring, give access to them through the walls, 4 feet thick, of the central hall. On the opposite narrow side these chambers received light and ventilation from loopholes cut through the outer wall near the top of the vaulting.

Construction of ruined pile.

Obviously a basement so massively constructed was capable of bearing a high and equally solid superstructure. But of this only a small portion has survived on the north-west, rising to a height of some 10 feet above the masonry that covers the vaults of the side-chambers. The latter are likely to have been useful for stores, etc., while the central hall evidently provided a cool place of the present *kemer* type for those who garrisoned this big tower or keep; for as such it was obviously meant to serve. The fact that the south-east and north-east walls of the fort are only continuations of the corresponding walls of the keep iii suggests that this was constructed earlier and by itself. The pile rises to a considerable height over the flat ground stretching away, unbroken by any surface features, to the terminal lake-bed and the gravel glacis of the Kuruk-tāgh; even in its present ruined state it offers a very distant outlook. It was thus well adapted for guarding routes which give access from that side to the oases of Lukchun or Kara-khōja, the ancient Kao-ch'ang. Not far off to the east of the site passes a route leading from Lukchun to Singer, a tiny but strategically important oasis in the western Kuruk-tāgh (see Map No. 55. D. 2), from which a number of tracks radiate towards the lower Tārīm, the ancient Lou-lan area, and Kara-shahr.[8]

Keep for guarding routes.

This fact adequately explains why the small stronghold may have originally been placed here. The fort is likely to have been added to it later to afford protection to those who cultivated the neighbouring area. The outer walled enclosure of irregular shape adjoining the fort to the north-east manifestly represents a still later enlargement, and its walls are of distinctly inferior strength. That there must at one time have existed around the fort and watch-station a settlement of such size as only cultivation of the surrounding ground could account for appears to me clearly indicated by the badly decayed remains of a much larger rectangular circumvallation built of stamped clay,

Later walled enclosures.

[8] The tower known as Bējān-tura (Map No. 59. A. 2) serves now an exactly corresponding purpose on the direct route from Singer to Turfān town, but did not appear to me very old when I had a chance of examining it in February, 1915. Bējān-tura lies close to the present western extremity of the terminal salt lake and nearly 400 feet lower than Chong-hassār. The ground to the north of it is very marshy, and in earlier times, when the extent of the salt lake was greater, may have been quite impassable. In that case all traffic from the side of Singer must have gone via Chong-hassār. How distant a view the latter place commands was brought home to me on my visit to Bējān-tura. Though some twenty-five miles away, the ruined fort with its keep could clearly be sighted from it.

which were traced only just before my departure from the site, and could therefore not be surveyed with accuracy. The wall, only about $2\frac{1}{2}$ feet in thickness, had been reduced by wind-erosion to a low, in many places almost imperceptible, mound; but its line could be followed north of the fort for a distance of over 700 yards running east to west, being best noticed where it occupied the top of rudimentary Yārdangs about 1–2 feet high. It approached the north corner of the fort within about 100 yards. Of its west and east faces, which were more exposed to wind-erosion, only small sections survived; the southern one I could not locate within the limited time left.

Former agricultural settlement.

A wall of this unsubstantial sort could only have served, as it were, police purposes. In this respect it could be compared with those equally flimsy walls which are to be found at the present day round several of the Turfān towns and villages, and which never fail to arouse derisive comment on the part of Chinese accustomed by tradition to seek safety behind far more solid ramparts. The soil around Chong-hassār is a fertile loess singularly free from that *shōr*, or salt efflorescence, which thickly covers the ground near the north shore of the present lake-bed. It only needs water to be brought under cultivation. As this is carried even now by the intermittent overflow of the Lukchun canals to within four miles or so of the site, I believe we may safely assume that Chong-hassār in Uigur times, and probably earlier also, had its agricultural settlement enjoying irrigation, and that the change which has come over the ground since is due to desiccation.

Ruined shrines of *Kichik-hassār*.

From my camp at Chong-hassār I was able to examine and, with the help of additional labour easily secured from Bēsh-tam, thoroughly to clear also an interesting group of small shrines known as *Kichik-hassār*, the 'Little Castle'. It is situated a little over two miles to the north-east from Chong-hassār, and reached over ground where vegetation is very scanty and the effect of wind-erosion distinctly more marked. The trenches cut by it into the loess soil all run from west to east and attain in places a depth of 5 to 8 feet. On approach to the ruins drift-sand is met with, heaped up in small 'Barkhāns' to a height of 8–10 feet. It is, perhaps, due to the protection afforded by the dunes that two of the ruined shrines had preserved their essential features. As the sketch-plan in Plate 50 and the photograph in Fig. 269 show, the site comprises a number of small Stūpas, with little domed cellas adjoining them, as well as some much-decayed structures near them which may have served monastic purposes.

Area of 'Tati' type.

The area occupied by the ruins stretches for about 120 yards from north-west to south-east, the direction in which its extent is greatest. Within this area the ground exhibits a typical 'Tati' character, being strewn on its eroded surface with small débris of pottery and bone fragments, most of which seemed human. All structural remains occupy erosion terraces, rising 4–5 feet above the adjoining ground. On the east or lee side of the better-preserved ruins the drift-sand was found heaped up to a height of 10 feet or so, as seen in Figs. 269, 270. The bricks used in them are all sun-dried, but relatively hard, with the fairly uniform size of 18″ × 8″–9″ × 4–$4\frac{1}{2}$″, the same as found at the ruins of Chong-hassār. The masonry is very regular, all bricks being laid in horizontal courses, often with their long and short sides alternately facing outwards. All structural details seemed to point to an approximately contemporaneous origin of the buildings.

Stūpa and domed cella I.

The largest complex of ruined structures is that to the west, marked I in the plan. It comprises a remarkably well-preserved Stūpa at its north end, with a domed cella and vaulted ante-chapel adjoining (Fig. 270). Further south lies a hall or court, 47 feet by 23, which may possibly have had a timber roofing. The purpose of the small arched niche in the west wall could not be made out. A much-decayed set of rooms adjoining to the south-west may have served for the quarters of monks. The Stūpa at the north end rises on a base, 24 feet square and 5 feet high, partly covered by sand. On this is set a circular base, 15 feet in diameter and 4 feet 6 inches high. This again is surmounted by a tower-like member close on 10 feet in height, representing the third

base and arranged in three slightly receding stories. Its ground-plan corresponds exactly to that of the Rawak Stūpa base.[9] It consists of a cruciform story superimposed on a square, the whole showing twenty projecting angles. A circular drum, ornamented with lotus leaves in low relief and a foot high, carries the cylindrical Stūpa dome now broken at its top. The total extant height of the Stūpa is about 24 feet.

A cutting made from the east into the third base, evidently by treasure-seekers and a long time ago, has laid bare an interesting feature of the Stūpa in the shape of a small inner chamber or well. This is $3\frac{1}{2}$ feet square and appears to have had its floor resting on the top of the circular base. This chamber or well, curiously enough, was originally made accessible by a small opening 2 feet wide, of which the plastered vaulting has survived at the top of the cutting. The opening or window appears to have been about 3 feet high, but the treasure-seekers' operation has deepened it to about 6 feet. Owing to the cutting it was impossible for me to determine whether the ancient opening, no doubt intended to facilitate a deposit of sacred objects within the chamber, was subsequently walled up or kept closed in some manner which would have rendered occasional inspection of the contents possible. I may add here that the Stūpa of group III (see Plate 50), which in all structural features was an exact replica of the one just described, except for slightly smaller dimensions, also had an interior chamber $3\frac{1}{2}$ feet square. As its east side was much injured, the opening which it is likely to have had there could not be traced. In the case of the Stūpa in group I treasure-seekers had not been content with effecting an entrance to the chamber from the east, but had burrowed also deep into the circular base from the north side. Inner chamber in Stūpa I.

The small cella v of I, immediately adjoining the Stūpa from the south, measures 8 feet 4 inches square inside. Its floor was found covered to a height of about 2 feet with sand and plaster débris, which had evidently not been disturbed. But the smoke-begrimed or burned walls and ceiling, and the scratchings visible everywhere on the surviving plaster surface, showed only too clearly the treatment to which the decoration of the shrine had been subjected. On the spherical ceiling of the dome only traces of painting remained, suggesting rows of small Buddha figures. But along the foot of the east and west walls some of the lowest portions of a frescoed frieze came to light from under the protecting layer, retaining strikingly fresh colours. Near the south-east corner it was possible to make out a procession including two richly caparisoned horses—the figures of the riders were lost—and attendants walking behind. The horse of the central mounted figure had its feet raised above the ground by demons; behind it a reddish-brown animal, perhaps meant for a panther or leopard, appeared led by an attendant.[10] What survived of a corresponding frieze on the west wall was even more injured; but the fragment H. B. 006, removed as a specimen, shows the fine red background and the brilliancy of the colouring in general. On the north wall of the cella were remains of a large painted vesica, once evidently enclosing a stucco image, and on its right the lower part of a richly-draped figure standing on a lotus.[11] Besides fragments of stucco relievo figures which were found both in the cella and in its antechapel,[12] there were also recovered from the former a small Stūpa model and a relief Buddha figure, both of clay and obviously votive offerings (H. B. v. 004–5). Several pieces of paper, bearing in Chinese print the same Buddhist magic formula, were also found on clearing the cella.[13] Fresco remains in cella I. v.

[9] See *Ancient Khotan*, ii. Pl. XL.

[10] Removal of this portion of the frieze was difficult; for fragments of it, see H. B. v. 006 in List below, also Pl. CXXV. For other smaller fresco fragments found detached among the débris of this cella and its antechapel, see H.B. 007–9.

[11] For a description of this fresco piece, wrongly marked H. B. i. 002, see List below; Pl. XII.

[12] For stucco relief fragments from the antechapel, see H. B. 001–5, 0010.

[13] See Chavannes, *Documents*, Nos. 988–9, Pl. XXXVI.

Finds in domed cella III. i.

Of the badly eroded building II, to the south-east of the Stūpa and shrine just described, little more survived than the foundations of the walls, as seen in the foreground of Fig. 269. But the group of small shrines, III, some 50 feet south of it, was much better preserved and yielded some interesting relics. The domed cella i, 7 feet 2 inches square, had evidently been long used as a habitation by shepherds or others, and of its wall-paintings only very scanty traces survived. But among the débris filling a narrow passage, which adjoins this cella on the north-east, there turned up three pieces of a painting on canvas, H. B. i. 003, showing a Thousand-armed Avalokiteśvara with rows of small Buddhas above. Though much of the paint is lost, the whole is of fine and delicate workmanship. Repairs made in antiquity prove that the painting was old when it was last deposited as an offering. From the ruin of another small cella, ii, adjoining the Stūpa on the north, numerous fragments of well-modelled stucco relief sculpture, mostly gilt, were recovered, besides fresco pieces which had found shelter under a shallow layer of sand in the corners near a central image base. Here were found also several fragments of a Chinese Sūtra text,[14] and small pieces of a printed Uigur leaf bearing glosses in Central-Asian Brāhmī script.

Relics from enclosure of Stūpa, iii.

A small enclosure, which appears to have once existed round the Stūpa, had lost its walls almost completely through erosion. But it had helped to retain layers of débris embedded in sand near the Stūpa base, iii, and in this was found the wooden statuette of a seated Buddha, H. B. iii. 001, shown in Plate CXXXVIII. Dowels at its flat back suggest that it was once attached to the Stūpa base, and this agrees with the position in which it was found, about 2½ feet above the ground. Hundreds of tiny fragments of a boldly written Uigur text, with red colophons, turned up along the south foot of the Stūpa base, evidently torn up intentionally; but whether for the purpose of votive deposit as at the Endere shrine[15] or as an act of vandal destruction could not be made out.

Uigur MS. fragments, etc., from shrine iv.

There still remains to be mentioned a small shrine, iv, with a completely ruined Stūpa, situated about 30 yards to the north-east of the central ruin II and seen on the right in Fig. 269. Of the Stūpa only the two lowest bases could be traced, the rest having apparently been destroyed in the course of treasure-seeking operations. Within the débris filling the cella there were found fragments of stucco relievo, some from a life-size statue; a few fresco fragments, including two with remains of Uigur inscriptions; and a small, but complete and well-preserved, Tibetan printed leaf. More Tibetan and Uigur fragments emerged from the débris surrounding the Stūpa base.

Occupation of Kichik-hassār site.

The manuscript remains recovered from the shrines of Kichik-hassār prove that the site was a place of Buddhist worship during the Uigur period, and make it highly probable that it continued as such at least as long as the occupation of Chong-hassār. Considering that even at the time of Shāh Rukh's embassy the greater part of the Turfān population was still Buddhist,[16] and taking into account what experience elsewhere shows about local worship clinging to sites otherwise deserted, it is difficult to say when the little temples may have seen their last pious visitors. I could find no traces of a settlement of any size having existed in the immediate vicinity. But considering the shortness of my stay and the necessity of keeping close to the ruins while excavation proceeded, mere 'Tati' remains, such as alone are likely to survive from agriculturists' dwellings on this eroded ground, may well have escaped attention amidst the low dunes. It is worth noting that the route from Lukchun to Singer passes close to the east of the site, and this may possibly help to account for the detached position of the shrines.

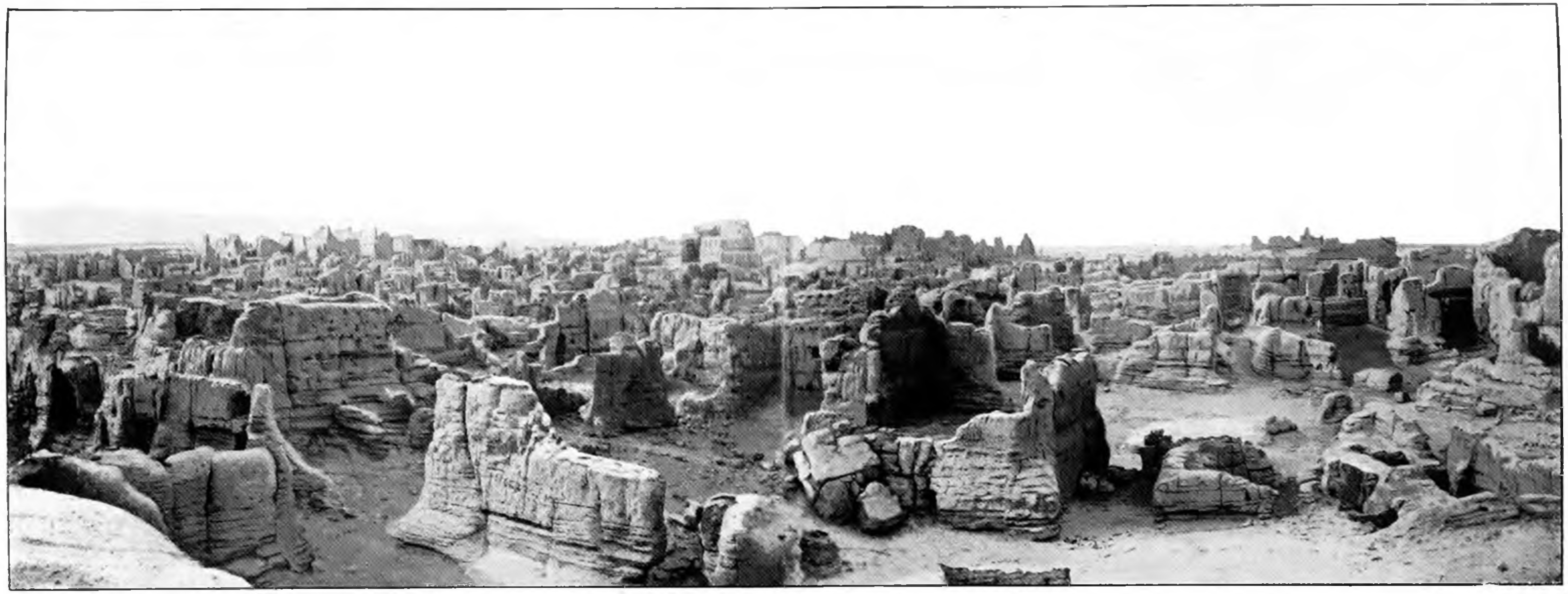
Leaving Bēsh-tam on November 18, I proceeded north to the townlet of Toyuk (Map No. 59. c. 1), famous for its grapes. In the picturesque gorge above it, lined with Buddhist shrines and caves

[14] See Chavannes, *Documents*, Nos. 985–7. For a similar Chinese Sūtra fragment, with Uigur writing on the reverse, from the cella H. B. i, see *ibid.*, No. 984.

[15] Cf. *Ancient Khotan*, i. p. 425.

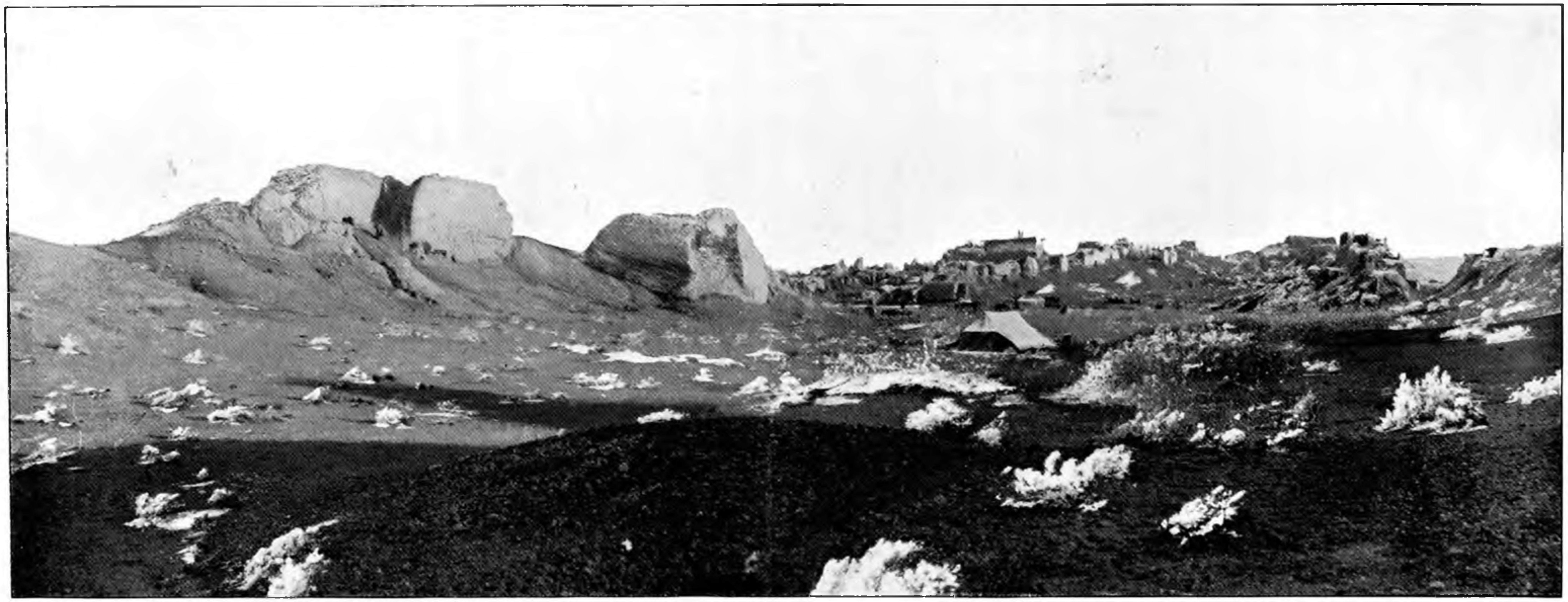
[16] Cf. Yule-Cordier, *Cathay*, i. p. 272.

P. 1166



273. PANORAMIC VIEW OF YĀR-KHOTO, TURFAN LOOKING FROM CENTRE OF RUINED TOWN TO NORTH-WEST AND NORTH. LARGE BUDDHIST TEMPLE RUINS IN DISTANCE.

x-xii II I



274. SOUTH-EASTERN PORTION OF 'MING-OI' SITE, SHŌRCHUK, WITH RUINED SHRINES OF CENTRAL GROUP OF N.W. PORTION (ON LEFT) SEEN FROM WEST.

A

275. MAIN STREET OF YAR-KHOTO, WITH RUINED SHRINE (A) FACING IT, AND EASTERN PORTION OF RUINED TOWN, SEEN FROM NORTH-WEST.

Trees of Yār-khoto village in distance on left.

A

276. CENTRAL PORTION OF RUINED TOWN OF YĀR-KHOTO, WITH SHRINE FACING MAIN STREET (A), SEEN FROM SOUTH-EAST.

(Fig. 271), I started the series of rapid excursions which were to acquaint me with the well-known sites of the Turfān district. In the course of them I visited Kara-khōja, the ancient Kao-ch'ang and the Turfān capital of T'ang and Uigur times, with its imposing ruins (Figs. 272, 277); the important series of Buddhist shrines and cave-temples which dot the sides of the narrow valleys descending from Murtuk and Singim, and among them the grottoes of Bezeklik with their fine mural paintings; and later, from the town of Turfān, the smaller sites along the slopes of the hill range east of Buluyuk. With most of these ruins I was to become more familiar during my stay of 1914–15, and for the reasons already indicated at the beginning of this section any observations I may have to offer regarding them must be left for another publication. As regards the local conditions affecting archaeological work there, and the facilities which unfortunately they offer for destructive digging by natives, a reference to my Personal Narrative will suffice here.[17] A few antiques, picked up on occasion of my visits to those sites or acquired by purchase, are described in the List below.[18] Visits to Turfān sites.

During my stay at the oasis of Turfān proper, where arrangements for topographical exploration in the Western Kuruk-tāgh and for transport detained me for a week, I took occasion to pay repeated visits to the remarkable ruined site of Yār-khoto (Map No. 54. D. 1), which was occupied by the capital of Turfān down to T'ang times. Its peculiarly strong position between two deep-cut ravines or 'Yārs', to which the place owes its modern name, half Turkī, half Mongol, as well as its ancient Chinese designation *Chiao-ho* 交河, 'converging streams', is well known and needs no detailed description here. The rough sketch-plan reproduced in Plate 49 shows the site close to its upper end and will help to illustrate the situation of the town, which occupies the southern half of the narrow island-like plateau. Of the striking appearance of its closely packed and in parts very massive ruins, the panoramic view in Fig. 273 and Figs. 275, 276, showing the central portion of the town on either side of its main street, will convey some impression. Ruined town of *Yār-khoto.*

The very extent of the area which the remains of dwellings, largely carved out of the live clay, cover in bewildering confusion would have rendered at any time the systematic exploration of the whole site a very protracted and difficult task. Nor could the hope of adequate results have justified such efforts; for even a cursory inspection sufficed to make it clear how sadly the ruins of the dead town lacked that protection which abandonment to the desert might have assured them. There was practically no drift-sand here to cover up any objects that might have escaped removal after occupation had ceased, and constant digging by the villagers for soil to be used as manure in the adjoining cultivated area had laid bare the natural hard clay in most of the dwellings, big or small. Conditions for archaeological work were obviously more favourable among the ruins of Buddhist shrines, to be found mostly near the northern end of the town and in the open space beyond it (Figs. 278, 279); for their walls, being structural, had fallen in their decay and covered the interior with heavier accumulations of débris. This explained why the partial clearings effected by previous European explorers appeared to have been confined mainly to their ruins. Exposed condition of ruined dwellings.

In order to gain some personal knowledge of the conditions in which antiques such as those brought to me for sale by neighbouring villagers[19] were being obtained at the site, I made experimental excavations at two modest ruins which it was possible to clear within the short time Excavation of dwelling.

[17] Cf. *Desert Cathay*, ii. pp. 359 sqq.

[18] In addition to these a number of Uigur text fragments, brought for sale by natives and acquired at Kara-khōja and elsewhere, still await examination. At the Toyuk site I picked up a considerable number of torn fragments from Chinese Buddhist Sūtra rolls in a débris-strewn ravine, where they had been thrown out from shrines above in the course of some previous exploration; for specimens of these see Chavannes, *Documents*, Nos. 990, 991, Pl. XXXVI.

[19] See for such the small bronze statuettes of Avalokiteśvara, Y.K. 005–007, Pl. VI, VII.

A number of fragmentary Uigur documents and Chinese Sūtra texts, all badly torn, were also acquired at Yār-khoto.

available. The first place selected was a small dwelling (i in plan, Plate 49) of which the basement story, cut out of the clay soil, retained a deep layer of débris left undisturbed by diggers for manuring earth. Four copper coins of the T'ang period, with the legend *K'ai-yüan*, were picked up almost on the surface. Some feet lower down, but still 5 feet above the floor, there were found 96 more Chinese copper coins, lying close together. Out of these, 93 bear the legend *K'ai-yüan* which, first introduced by the founder of the T'ang dynasty in A.D. 618–27, was continued in the mintage of his successor for more than a century. Two others are issues of the Ch'ien-yüan period (A.D. 758-60), while one is a *Wu-chu* piece anterior to A.D. 600. From the way in which these coins turned up it seemed probable that they belonged to a small hoard of late T'ang times that may have been placed in an upper-story wall and had fallen down with it. The only other find made was the bronze knife-handle, Y.K. i. 001, Plate VII, ornamented with fine floriate scroll-work in relief. Immediately adjoining this basement on the south-east were found the badly decayed walls of a diminutive shrine ii, about 4 feet square, with an enclosing passage only $1\frac{1}{2}$ feet wide. From the débris filling the latter a sheet of paper was recovered, with close lines of Uigur writing on both sides.

Coin find of T'ang times.

Relics from Buddhist shrine Y.K. iii.

Less than 200 yards to the south-west, and close to where the north end of the closely built town area adjoins the western 'Yār', a large room, iii, near a partially excavated Buddhist shrine, attracted my attention as having escaped recent manure-digging operations. In it was brought to light the interesting bronze open-work ornament Y.K. iii. 002 (Plate VI), evidently broken from some larger piece, showing little gilded Buddhas seated on stems rising from a lotus branch; also a wooden key of the type recovered at Khādalik,[20] and the well-made quilted shoe ornamented in an imbricated scale pattern, Y.K. iii. 001. Of two Chinese copper coins found in the same place, one shows the *nien-hao* Ch'ien-chung (A.D. 780–4), the other being a K'ai-yüan piece. The previously mentioned shrine to the south, iv, occupied a high terrace, cut as usual at this site out of the natural clay soil. The passage at the back of what must have been a central platform for images had not been excavated by those who previously were at work here, and it yielded a number of well-modelled stucco relievo fragments, including the face of an over life-size Buddha statue, Y.K. iv. 001. Of the fine fresco work which once decorated the base of the central platform only small fragments, Y.K. iv. 006, 007, were recovered.

I may add that my visits to Yār-khoto were also utilized for physical measurements on a large number of men from the adjacent villages (Fig. 264);[20a] for the considerable mixture of racial elements, to which the population of the Turfān basin is likely to have been subjected in the course of history, made the collection of adequate materials for its anthropological study particularly desirable.

LIST OF ANTIQUES EXCAVATED OR ACQUIRED AT TURFĀN SITES

OBJECTS EXCAVATED AT RUINED FORT OF CHONG-HASSĀR

H. A. 001. Fr. of rim of wide-mouthed pottery jar; wheel-made, of well-levigated grey-drab burning clay, kiln-fired, hard but flaky texture. Solid rim, sq. with cavetto edge; on side rudely scratched wave pattern. Orig. diam. *c.* 9". Fr. $6\frac{1}{2}$" × 4".

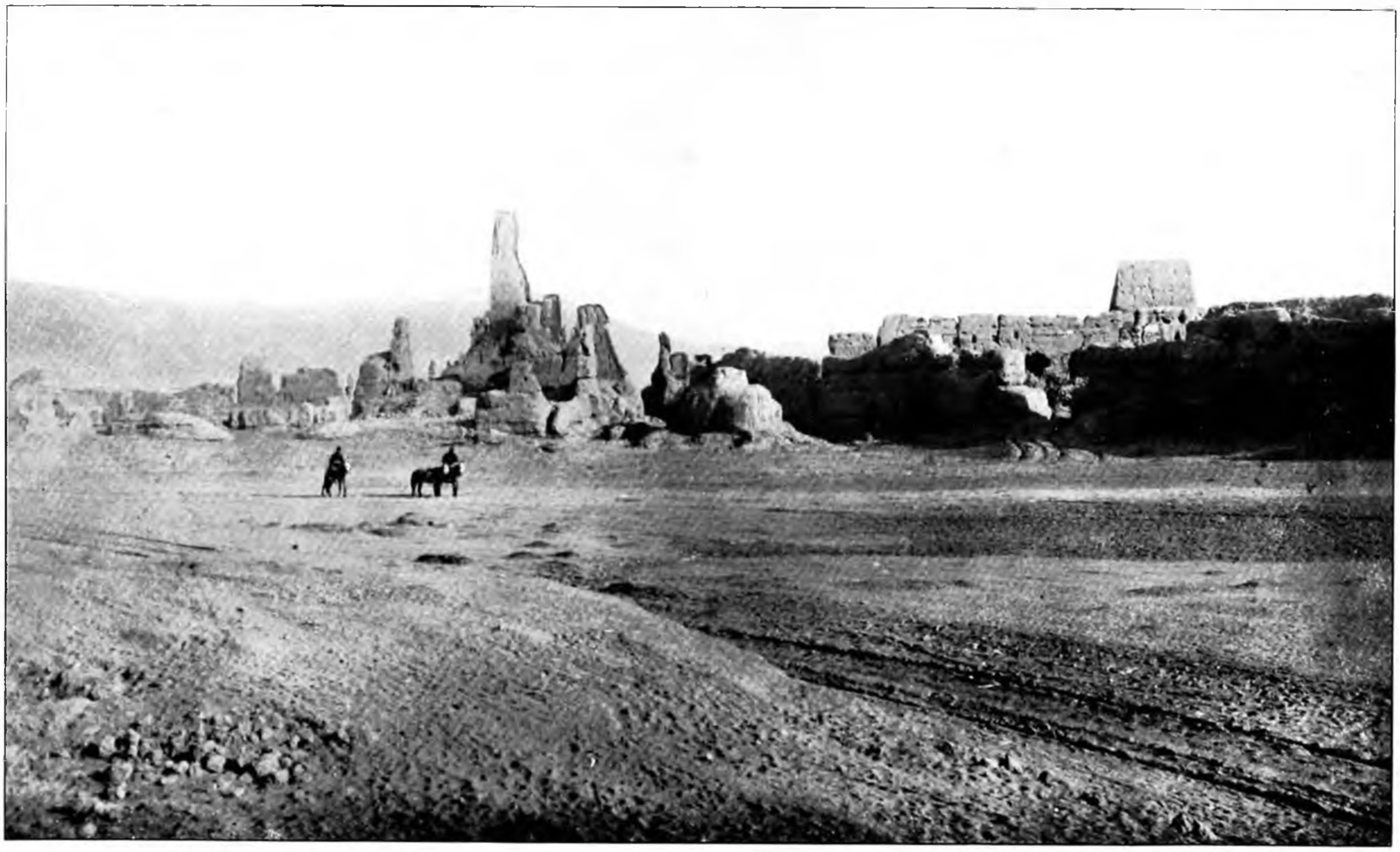
H. A. 002. Fr. of rim of wide-mouthed pottery jar; wheel-made, of well-levigated grey-burning clay, finished inside with engobbage; kiln-fired. Rim turned out at right angles sq.-edged. Below rim rudely scratched wave pattern. $4\frac{1}{2}$" × $2\frac{1}{4}$".

H. A. 003. Fr. of straight-walled pottery jar; wheel-made, of peculiarly ill-levigated grey-burning clay, smoothly finished outside, fired in a smother 'kiln'. Rim thickened outwards, with small notched mouldings along outer edge. Below these band of rough comb-drawn wave pattern, below which two sunken bands enclosing band in low relief. 4" × 3", thickness *c.* $\frac{1}{2}$", orig. diam. *c.* $9\frac{1}{2}$".

***H. A. 004. Stucco relief fr.;** one of many showing seated Buddhas prob. from large vesica. Buddha sits in meditation on lotus (pink and green); red mantle covering

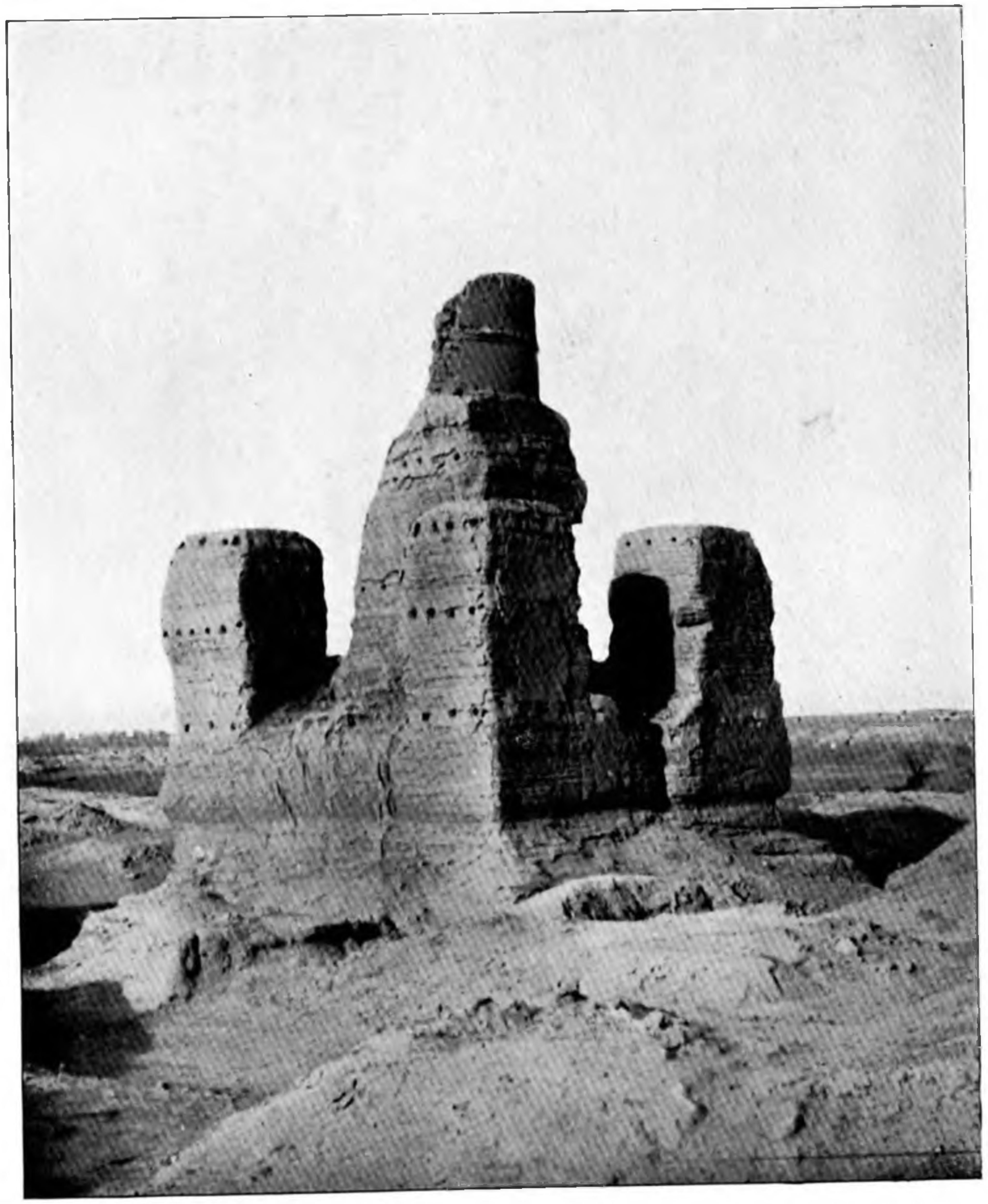
[20] See Kha. v. 006, above, p. 192.

[20a] For these measurements see below, Joyce, Appendix *C*.

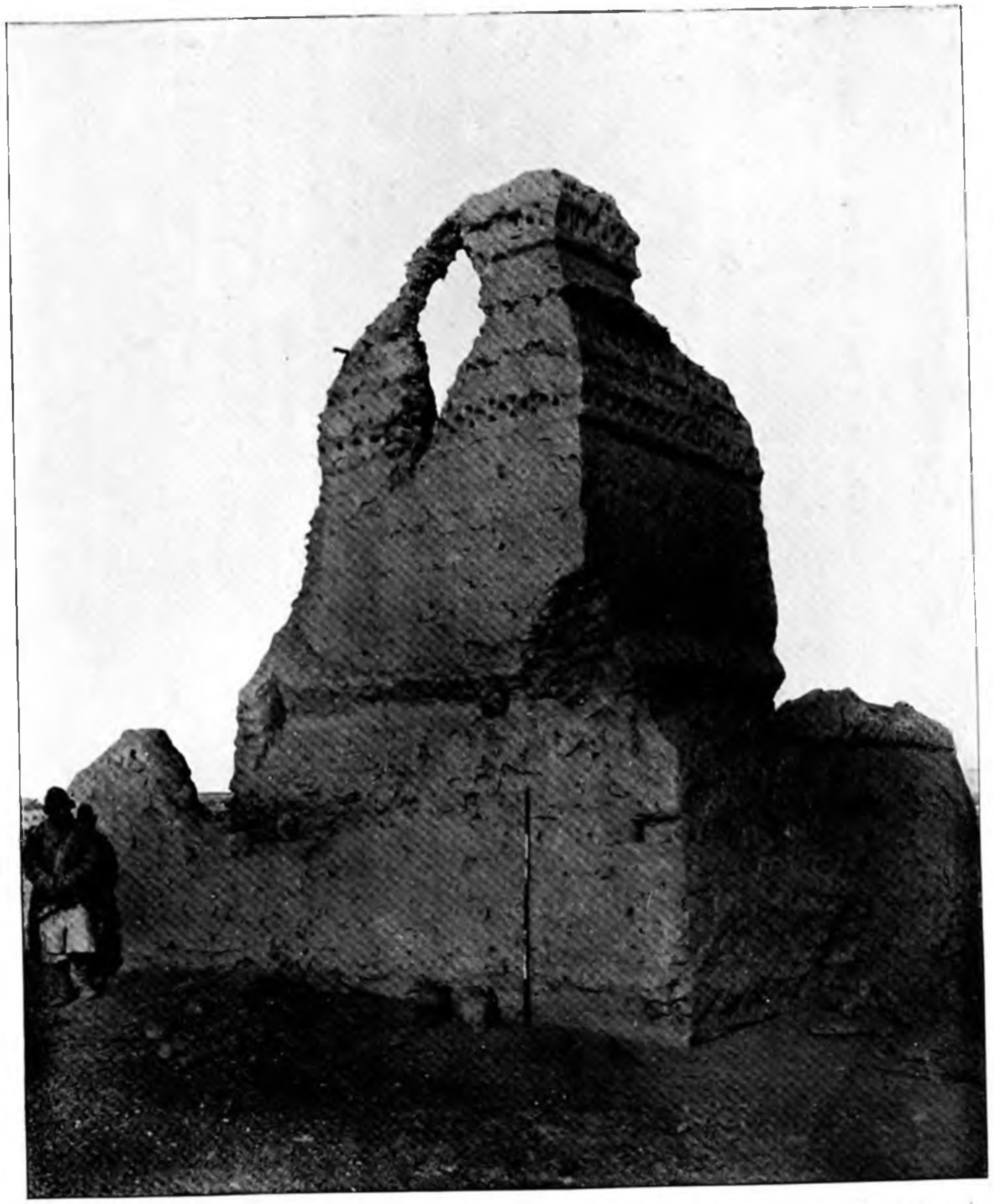


277. RUINS OF 'KHĀN'S PALACE', WITHIN RUINED TOWN OF KARA-KHOJA, TURFĀN, SEEN FROM SOUTH-WEST.

278. CENTRAL TEMPLE RUIN AND PART OF ENCLOSING COURT OF LARGE BUDDHIST VIHĀRA, YĀR-KHOTO, SEEN FROM SOUTH.



279. CENTRAL GROUP OF STŪPAS AT NORTHERNMOST BUDDHIST SANCTUARY, YĀR-KHOTO.



280. FUNERAL MONUMENT, Mi. xxii, AT 'MING-OI' SITE, SHORCHUK, WITH CINERARY URNS OUTSIDE ENCLOSING WALL.

completely L. arm and shoulder, also R. shoulder and upper arm. Inner robe (green with red border) crosses body diagonally from L. shoulder. Hands exposed. Flesh greyish white with details in red; eyes, eyebrows, and hair black. Individual vesicas apparently light vermilion; no haloes. Fig. with lotus throne $5\frac{3}{4}''$ high. All figs. much damaged; only one with head; only fr. of vesicas preserved; colours usually much perished.

From same mould: H. A. i. 001, 002, 004, 005; 007 (head only); H. A. i. pass. 001, 002 (with head); H. A. i. E. pass. 001. All of soft clay mixed with fibre, unburned. Cf. *H. A. i. 003.

004, head and all L. side missing. $3\frac{7}{8}'' \times 2\frac{1}{4}''$.

H. A. 005. Stucco relief fr. of edge of vesica. Border of two rows of spiral flames separated by double raised moulding. Trace of red. Soft clay plentifully mixed with fibre. $5\frac{1}{2}'' \times 3\frac{1}{2}''$.

H. A. 006. Inscribed wedge of clay mixed with fibre; the two sides white-washed. On one side 9 ll. (damaged) of Uigur writing in black. On *rev.* design of three red fruits (?) with green leaves on a yellow ground, outlined in black, a flower in orange and yellow and part of another in red and green. $8\frac{1}{2}'' \times 8\frac{1}{2}''$ (inscribed side); $8\frac{1}{2}'' \times 4\frac{1}{2}''$ (painted side); $2\frac{3}{4}''$ thick at base.

H. A. 008. Bronze ring; flat under-side, bead orn. above. Found 15. xi. 07. Diam. $\frac{1}{2}''$.

H. A. 009. Fresco fr. on concave surface of wall, the curve being vertical. Shows fat dancing child, clad in necklet, brown shoes, turquoise-green stole and loose orange breeches, beating a drum which is hung round his neck by a cord. The drum is of the cylindrical waisted shape, and is struck with open hands. It is painted maroon. Flesh pink, outlines and features in Indian red, other outlines black and hair black. On L. edge trace of orange drapery of another fig. For similar dancing infants cf. Ch. paintings, e.g. Ch. lii. 003. Drawing rough and surface worn. $8'' \times 10''$. Pl. XII.

H. A. 0010. Fresco fr. with part of torso and L. arm of Bodhisattva. Robe (discoloured) dirty drab with bands of red following festoon-like lines of folds outlined black. Necklet, bracelet, and broad armlet with pointed jewel boss. Stole from shoulder passes over and under forearm. Flesh light pink. L. hand at breast. All outlines black. Cf. H. A. 0011. Much abraded. $7\frac{1}{4}'' \times 5\frac{1}{4}''$.

H. A. 0011. Fresco fr. with L. upper arm, shoulder, and part of wrist of Bodhisattva (?). Broad armlet with large green jewel, bracelet, necklet, and disc-shaped ear-ring at shoulder from which hangs half-open lotus terminating in a heavy green jewel. A dark pink stole winds from behind shoulder and falls over forearm. Hand raised to breast. All outlines black. Much abraded. $4\frac{1}{2}'' \times 5\frac{1}{4}''$.

H. A. 0012. Fresco fr. showing portion of broad border in two main bands divided by narrow white band. One band has red ground on which is half a quatrefoil flower set with diagonal on white band so that one complete leaf and two halves appear. These are each trefoil, grey with white edge and dark grey base in which is a black spot. In centre of flower, coinciding with outer petals, are simple petals, red, white-edged, and black-centred. On other broad band is bold floral scroll in green on black. All outlines black. Small piece of second narrow white band at edge of red band. Clay mixed with fibre and straw. Fair condition. $6\frac{1}{4}'' \times 9''$.

H. A. 0013. a–c. Fresco frs. On buff ground, portions of red scroll-work outlined black. Very fragile. Clay mixed with fibre. Gr. M. $3\frac{3}{4}'' \times 2\frac{1}{8}''$.

H. A. 0014. Fresco fr. with hand of fig. grasping fold of stole between thumb and first finger; bracelet. Curved stole, grey and green, runs partly under fingers. Red ground. Outlines black. Much abraded. $3\frac{7}{8}'' \times 2\frac{7}{8}''$.

H. A. 0015. Fresco fr. showing detail of drapery of dark red robe. Background buff. The work appears to be unfinished, all the outlines, including unintelligible work on background, being sketched in with pale grey as a guide for the colours. The final outlining in full black seems not to have been reached. The red is in dark and light to express folds, the upper surfaces being left buff. Abraded. $6\frac{1}{8}'' \times 3\frac{3}{8}$.

H. A. 0016. Fresco fr. showing on buff ground six lines of Uigur (?) writing, undecipherable. $6'' \times 4\frac{1}{2}''$.

H. A. 0017. Fresco fr. showing prob. part of forehead, hair and head-dress of Bodhisattva (?). Above is mass of black hair, crossed by white fillet from which hangs looped string of white beads resting on hair. On upper edge of fillet rest circular jewels, buff and red (only partially preserved), of tiara. Lower part in flesh-colour shaded light and dark pink under festooned edge of hair. $3\frac{3}{8}'' \times 1\frac{3}{4}''$.

H. A. 0018–20. Fresco frs. showing details of scroll-work, etc., quite unintelligible. Rather rough work. Clay mixed with straw. Gr. M. $3\frac{1}{4}'' \times 2\frac{3}{4}''$.

H. A. 0021. Fresco fr. Apparently detail of a costume in red, buff, and green colouring, outlined black. Part in red and buff, or red and green check. Much abraded. $2\frac{1}{2}'' \times 2\frac{1}{4}''$.

H. A. 0022. Fresco fr., rather unintelligible. The surface is divided into straight bands of varying widths by black lines. The second from the top has a green leaf scroll, the ground being half red and half pale pink. Next band, perhaps originally blue. On this is a roughly drawn human foot in black outline with toes directed downwards and overlapping the next band, which is red, with a trefoil leaf in grey repeated at an interval of 2". Below, two more bands of buff and grey with traces of green. Work rough. $6'' \times 4\frac{3}{4}''$.

H. A. 0023. Stucco relief fr. R. hand, back only, as applied to core which is now lost. Fingers and thumb straight. Prob. from pair of hands palm to palm in adoration. Poor modelling. Soft red clay. Length $2\frac{1}{8}''$.

H. A. 0024. Stucco fr. Convex surface, covered with white slip on which are remains of gilding. Soft red clay. 3" × 1¼".

H. A. 0025. Pottery fr. (?). Rounded knob of buff clay covered with deep blue glaze and pierced. Length ⅜".

***H. A. i. 003. Stucco relief fr.** One of several figs. of seated Buddha from a large vesica. Closely resembles *H. A. 004, but on smaller scale; attitude, drapery, and colouring the same. Total height of fig. *c.* 3½", but no heads preserved; from base of lotus throne to top of individual vesica 6"; vesica apparently pink and green, throne white (?).

From same mould: H. A. i. 006, 008 (head only), 009 (retaining much of background); i. E. 001; i. E. pass. 002. All of grey clay on clay and grass backing. Colour partly preserved. 3¾" × 3¼".

H. A. i. 0010–11. Stucco relief frs. Ends of two fingers, life-size: 0010, painted pink, nail shown; 0011, tip missing, covered with white slip from which paint is gone. Soft clay. Length: *0010*, 1⅝"; *0011*, 1¾".

H. A. i. 0012. Fr. of white plaster mixed with fibre; curved surface, gilded. 2½" × 2".

H. a. i. 0013. Wooden model of spear-head. Long narrow blade with sharp central ridge, shouldered to round haft, long, and ending in ring. Wooden shaft broken off at ring. Painted blue-black over a white size. Prob. from a stucco relief fig. 8⅞" × ¾".

H. A. i. 0014. Fr. of carved wood. Relief combined with open-work. In form, quarter of wheel with scalloped border. Traces of blue paint. 4½" × 2½".

H. A. i. 0015. Stucco relief fr. R. hand, thin and gnarled, fingers bent as if grasping convulsively, thumb lost. Back only worked, painted red. Bad condition. Soft clay mixed with straw. 7" × 3½". Pl. CXXXIX.

H. A. i. 0016. Stucco relief fr. L. hand, bent at knuckles. Thumb gone. Flesh white, nails red. Soft clay mixed with fibre. 3" × 2".

H. A. i. 0017. a. Stucco relief fr. Finger, broken both ends, painted pink. Soft clay. Length 2".

H. A. i. 0017. b. Stucco relief fr. Part of wrist with bracelet. Flesh painted pink; bracelet in form of double bar with bead border. 2½" × 1½".

H. A. i. 0018–19. Stucco relief frs. Two fingers, life-size, covered with white slip. Tip of 0018 missing. Length 2⅛" and 3¼".

H. A. i. 0020. Fresco fr. Head and R. shoulder, prob. of Lokapāla. Hair green, festooned on forehead, and with bold *mukuṭa* of scroll design enriched with red beads. Above this the hair streams upwards. Flesh pale buff. Eyebrows meet over nose and rise sharply upwards before turning across brow. Eyes slightly oblique; other features perished. Red bands of drapery across shoulder, on which hangs disc-shaped orn. of ear-ring and green and red jewels. From behind shoulder streams a green brush-like mass (perhaps flame). Cf. Ch. 0098. Clay mixed with straw. Much abraded. 9½" × 6½".

H. A. i. 0021. Fresco fr. showing middle part of standing Bodhisattva. Lower robe red, with turnover (round hips and loins) grey with dark reddish-brown lower edge. White cloth round waist with ends hanging down centre and green girdle round loins, tied in bow in front, and ends floating R. and L. Red scarf is coiled round arms, hanging straight to ground from bend of each arm. Bracelets. R. arm is bent across body, grasping brown stick-like object, which is held upright; hand very badly drawn. L. arm raised rather more, prob. grasping same object higher up. Body nude from waist up, but end of green scarf at centre. On R. is dark pink R. arm and hand with bracelets. The hand grasps a rope (?) and is bent stiffly out and down. Cloud-like scroll, in pink and red, proceeds to R. and L. at hip level of principal fig., extending at L. on to H. A. i. 0024 (q.v.). Background green, powdered with rings in muddy yellow. All fig. outline black. 8⅜" × 8". Pl. XII.

H. A. i. 0022. Fr. of miniature linen banner (hemp ?) with its upper end cut into triangle and hemmed, and loop for hanging at point. Paint nearly cracked off, but showing traces of seated or kneeling Bodhisattva with brown halo, white flesh, green and red stole. 5¾" × 3¾".

H. A. i. 0023. Fr. of coarse linen fabric (hemp ?), heavily painted on both sides over white slip. Paint nearly all cracked off, but traces remain on one side of Bodhisattva standing on pink lotuses, L. arm akimbo, with long red *dhōtī*, green girdle, red stole, and green streamers from head-dress (?). On back another standing fig., traces only of grey girdle, R. hip, red stole, and dark blue drapery across chest remain. All outlines black. Much decayed. 1' 6" × 9¼".

H. A. i. 0024. Fresco fr. with portions of cloud scrolls in grey and red. Background green powdered with yellow rings. Joins H. A. i. 0021. 4" × 4⅜".

H. A. i. 0025. Fresco fr. Portion of cloud scroll and indistinguishable detail, on background of green, powdered with darker rings. Prob. part of H. A. i. 0021. Much broken and abraded. 4" × 3".

H. A. i. 0026–27. Two fresco frs., showing on deep maroon ground scroll-work in white outlined black, and shaded with orange and red. Work rather rough. Abraded. *0026*, 6½" × 4"; *0027*, 3½" × 3¼".

H. A. i. 0028. Fresco fr. Very delicately painted detail of drapery in mauve, red, and greens, outlined with fine black line. Too fragmentary to make out. The ground colour has not adhered well to the plaster, and is flaking off. Clay mixed with straw. 2¼" × 2¼".

H. A. i. 0029. Fresco fr. Detail of drapery in shades of green outlined with black. Unintelligible. 2⅛" × 1⅝".

H. A. i. 0030. Fresco fr. Small detail of orn., red, green, pink, and black; unintelligible, but showing considerable care and skill in execution. $1\frac{1}{2}'' \times 1\frac{1}{2}''$.

H. A. i. 0031. Fr. of silk brocade, much worn and frayed. Weave, satin twill with fine warp and broad untwisted weft as in Ch'ien-fo-tung brocades; e.g. Ch. 009. Pattern hardly distinguishable, but seems to have comprised large circular panels, containing small flowers and buds in dark blue and old gold on white ground. Green and light red yarns also in weft. $8'' \times 2''$. Pl. CXII.

UIGUR MANUSCRIPT REMAINS FROM CHONG-HASSĀR

H. A. i. 3. Fr. of Uigur MS. on soft brownish paper; dirty and much torn. *Obv.* 5 ll. heavy writing. *Rev.* blank. $5\frac{1}{2}'' \times 3\frac{1}{4}''$.

H. A. i. 4. Two frs. of Uigur MS., on light buff paper, showing 'laid' marks, insect-eaten in places but condition generally fair. *Obv.* 8 ll. and 7 ll. clear writing. *Rev.* blank. Gr. fr. $5\frac{1}{2}'' \times 4\frac{1}{4}''$.

H. A. ii. 1. Fr. of Uigur (?) MS., on coarse brown paper. Frs. of a few chars. only, on one side. Gr. M. $1\frac{1}{2}''$.

H. A. ii. 2. Fr. of Uigur MS., brownish paper, sand-encrusted. *Obv.* 5 ll., *rev.* 2 ll., torn in middle. $3'' \times 2''$.

H. A. ii. 3. Fr. of Chin.-Uigur (?) MS., on smooth light buff paper. *Obv.* a few Chin. chars. between ruled lines. *Rev.* 4 ll. Uigur, very faint. Also perished frs. of same manuscript felted into lumps. $3\frac{3}{4}'' \times 2\frac{1}{4}''$.

H. A. ii. 4. Fr. of Uigur MS., on soft brownish paper. *Obv.* 7 ll., and rough sketch of helmeted head in corner. *Rev.* blank. $3'' \times 3''$.

H. A. ii. 5. Fr. of Uigur MS., on coarse brownish paper, sand-clogged. *Obv.* 7 ll., *rev.* 5–6 ll., almost effaced. $9'' \times 4''$.

H. A. ii. 6. Fr. of Uigur MS., on soft brownish paper, somewhat decayed. *Obv.* 5 ll., *rev.* 4 ll. Also fr. of plain blue silk. $5\frac{1}{2}'' \times 2\frac{1}{4}''$.

H. A. ii. 7. Fr. of Uigur MS., on soft brownish paper. *Obv.* 7 ll. moderately clear writing. *Rev.* blank. Also two small frs. less than 1" in length, retaining parts of Uigur chars., and fr. of blank paper. Chief inscr. fr. $4\frac{1}{4}'' \times 4''$.

H. A. ii. 8. Fr. of Uigur MS., on coarse brownish paper, sand-clogged. *Obv.* 6 ll. rapid scrawly writing. *Rev.* 3 ll. in much heavier writing of same character, and part of red seal impression. $6'' \times 4\frac{1}{2}''$.

H. A. ii. 10. Fr. of Uigur MS., on thin brownish paper, considerably decayed. *Obv.* parts of 8 ll. fairly clear black writing. *Rev.* 5 ll., worse condition. $7\frac{1}{2}'' \times 3\frac{3}{4}''$.

H. A. ii. 11. Fr. of Uigur MS., on coarse soft brownish paper. *Obv.* 7 ll. rather scrawly hand. *Rev.* blank. $4'' \times 2\frac{1}{4}''$.

H. A. ii. 12. a–b. Two frs. of Uigur MS., on soft brownish paper. (*a*) *Obv.* 6 ll., *rev.* 3 ll., indifferently preserved. (*b*) *Obv.* 5 ll., *rev.* 3 ll., like condition. (*a*) $10\frac{1}{4}'' \times 5''$; (*b*) $4'' \times 3\frac{1}{2}''$.

H. A. ii. 13. a–d. Four frs. of Uigur MS., on soft light buff paper, showing 'laid' marks. (*a*) *Obv.* 8 ll., *rev.* 8 ll., fairly preserved. $7\frac{1}{4}'' \times 4''$. (*b*) *Obv.* 8 ll., *rev.* 8 ll., same. $3'' \times 4''$. (*c*) *Obv.* 6–7 ll., written partly one on top of other. *Rev.* blank. $2\frac{1}{2}'' \times 1\frac{3}{4}''$. (*d*) *Obv.* confused chars. *Rev.* blank. Gr. M. $1\frac{3}{4}''$.

H. A. ii. 14. Fr. of Uigur MS., on soft brownish paper. *Obv.* 12 ll. writing, fairly preserved. *Rev.* blank. $6\frac{1}{2}'' \times 4\frac{3}{4}''$.

H. A. ii. 15. a–b. Two frs. of Uigur MS., on brownish paper. Traces of 2 (?) ll. writing on *obv.*, almost obliterated by dirt. *Rev.* blank. Gr. fr. *c.* $3\frac{1}{2}'' \times 1\frac{1}{4}''$.

H. A. ii. 16. Fr. of Uigur MS., on soft brownish paper. *Obv.* 7 ll. writing in fair condition. *Rev.* blank. $6'' \times 3\frac{1}{2}''$.

H. A. ii. 17. a–b. Two frs. of Uigur MS., on thin light buff paper. (*a*) *Obv.* 3 ll. (chars. of side lines incomplete) blurred writing. *Rev.* blank. (*b*) *Obv.* 3 ll., *rev.* 1 l., still more indistinct. Gr. fr. $8\frac{1}{2}'' \times 1''$.

H. A. ii. 18. a–g. Six frs. of Uigur (?) MS., on various paper and in various hands. Scraps only. Fair condition. (*a–b*) show remains of 6 and 2 ll. heavy writing; (*c*) 4 ll. in lighter hand; (*d–f*) 1–3 ll. in hand like (*c*). *Rev.* blank in all. Gr. fr. (*a*) $3\frac{3}{8}'' \times 1\frac{5}{8}''$. Also fr. of cotton cloth (*g*) covered with crimson lacquer. $2\frac{1}{4}'' \times 1''$.

OBJECTS EXCAVATED AT RUINED SHRINES OF KICHIK-HASSĀR

H. B. 001. Stucco relief fr. R. foot, painted pink, broken across instep. Moulded shell only, hollow beneath. Underneath, a folded piece of brown woollen (?) cloth. (Stucco) $3\frac{1}{8}'' \times 2'' \times 1''$. (Fabric) $7\frac{1}{2}'' \times 5\frac{1}{2}''$.

H. B. 002. Stucco relief fr. of seated Buddha. Head and R. side gone. Traces of green on inner robe. Perfunctory lotus throne. Type and attitude as *H. A. 004. Soft clay. $3\frac{3}{4}'' \times 3\frac{1}{4}''$.

H. B. 003. Stucco relief fr. End of hanging drapery. White. Bold and graceful work. $3'' \times 1\frac{3}{4}''$.

H. B. 004. Stucco relief fr. from appliqué jewellery. Double bar with bead border; slightly curved to fit convex surface. Remains of white slip. Soft clay mixed with fibre. $3'' \times \frac{3}{4}''$.

H. B. 005. Stucco relief fr. Strip of appliqué band.

Green paint and gilding over white. Soft clay mixed with fibre. $1\frac{3}{4}'' \times \frac{1}{4}''$.

H. B. 006 (recte v. 008). Fresco fr. On brilliant red ground appears a white globular vase-like object against which is a human foot, outlined red. Drapery of the lower part of a flying fig. (?), and floating ends of scarves, and blue and red beads are scattered about this red background; but it is too fragmentary to reconstruct. The draperies are freer in treatment than those of H. B. i. 002, but have the shading noted in that example. Colouring very fresh. $11\frac{1}{4}'' \times 8\frac{1}{2}''$.

H. B. 007. Fresco fr. Much abraded. Seems to represent part of ornamental inlaid pavement arranged in irregular rectilinear shapes, each shape being either red, green, or buff, with a scroll pattern painted in outline in a darker tint. Buff dividing bands run between the 'tiles'. Towards one end is perhaps part of a Padmāsana, but fr. too much damaged to determine. $10\frac{3}{4}'' \times 6''$.

H. B. 008. Fresco fr. Dirty buff and white, with black and red lines. Unintelligible. $2'' \times 1\frac{1}{2}''$.

H. B. 009. Fresco fr. On light red ground, part of Buddha (?) head. Flesh buff, all outlines black, hair black and close-cropped. Eyes straight, slightly downcast. Good strong work. $1\frac{3}{4}'' \times 1\frac{3}{8}''$.

H. B. 0010. Stucco fr. Small human finger. Top joint delicately tapered and recurved, and whole finger slightly crooked. Paint pale buff over white slip. Clay mixed with fine fibre. $1\frac{3}{4}'' \times \frac{5}{16}''$.

H. B. i. 001. Stucco relief fr. of flame (?) orn. Vermilion. Soft clay. $1\frac{1}{2}'' \times \frac{3}{4}''$.

H. B. i. 002. (recte H. B. v. 007). Fresco fr., upper part missing and broken edge burnt. Shows feet and lower draperies of fig. standing on lotus. Feet in profile to L., bare, but with heavy upward-curling anklets orn. with round green jewels. Skirts of drapery reach about half down lower leg, and have broad border of scroll-work in black outline on dark buff. All the drapery is arranged formally in festoon-like folds, very regular and evenly spaced. Each fold is indicated with a black line, with a faint grey shadow following it from end to end, and over this a pink wash again following the line. General tint of drapery light pink. From the waist girdle hang two bands, evenly twining about each other, with two parallel black lines $\frac{1}{8}''$ apart, running along the centre of each. To L. is end of a floating scarf, pink. Bead-jewels, sometimes attached to ornamental bosses, hang from girdle.

Padmāsana has green centre, inner ray of petals, curling upward, grey with lighter edges and black centres; outer ray, curling outward, light scarlet with yellow edges and maroon centres. General background dark red brown. All outlines black, including flesh, but excepting anklets and ornamental bosses, which are outlined red. The general style of work shows excessive stylization, especially in monotonous treatment of drapery. From north-east corner of cella H. B. v. (erroneously marked). $1' 8\frac{1}{2}'' \times 1' 1''$. Pl. XII.

H. B. i. 003. a–c. Three frs. of canvas painting, fine cotton (?), repaired in antiquity with backing of closer dark red fabric. From portion of main fig. preserved on (*b*) and (*c*) seems to have been Thousand-armed Avalokiteśvara. Top of head seen on (*b*) with black hair, flowered diadem, and circular nimbus, green, with red and buff border. Flesh pink outlined red; head $\frac{3}{4}$ to L. On either side are upraised hands, R. holding red disc with black radii, prob. the disc of the Sun; L. a plain bluish-white disc, that of the Moon. On (*c*) remains fold of red drapery across breast, and two hands in attitude of adoration. On R. traces of radiating arms and buff background covered with small spiral diaper in fine black lines. Along upper edge of painting (*a*) and (*b*) is row of miniature seated Buddhas, black-haired, pink and red robed. Background dark blue. Between the Buddhas are oblong vermilion labels for inscriptions (blank). Below on (*a*) is part of canopy (?) of fig. adjoining Avalokiteśvara, against background of cushion-leaved red-flowering trees common in Ch. paintings (e.g. *Ch. lii. 003). The canopy top is formed of three boss-like jewels, in circular down-turned flower settings, red and maroon, with pearl and conical flame on top. Below at L. on red ground is part of orn., buff outlined red, with blue and green jewels; and across red ground below is black curving band on which are narrow white petals set side by side.

Much paint lost everywhere. Good fine workmanship. $1' 2'' \times 1' 7''$.

H. B. ii. 001–2. Stucco relief frs. Pair of feet broken across insteps. Traces of yellow paint on feet and on ground of white and green (lotus throne?); core of stand projects below. Soft clay mixed with straw. $3\frac{1}{8}'' \times 2'' \times 1\frac{1}{2}''$.

H. B. ii. 003. Stucco relief fr. Little finger, curled. Plentiful remains of gilding. Soft clay mixed with fine fibre. End to end $2''$.

H. B. ii. 004. Stucco relief fr. of hanging drapery. Cf. H. B. ii. 006; end missing. Traces of gilding. Soft clay. $3\frac{1}{4}'' \times 1\frac{1}{8}''$ to $\frac{7}{8}''$.

H. B. ii. 005. Stucco relief fr. Zigzag end of hanging drapery. Traces of gilding and of green over gilding. Soft clay mixed with fibre. $2'' \times 1\frac{3}{16}''$.

H. B. ii. 006. Stucco relief fr. End of hanging drapery quite straight with two perpendicular grooves and zigzag ends as H. B. ii. 005. Outer folds, gold; centre folds, green with gold; border edges red. Soft clay mixed with fibre. $6'' \times 1\frac{3}{8}''$.

H. B. ii. 007. Stucco relief fr. Edge of drapery; wave-like folds. Traces of gilding. Soft clay mixed with fibre. $3'' \times 1\frac{1}{2}''$.

H. B. ii. 008. Stucco relief fr. Wrist of fig. under life-size; shows bracelet with three rows of beads and

plain borders. Traces of gilding. Hollow inside showing marks of reed core. Soft clay mixed with fibre. Length 2″, diam. $1\frac{3}{4}$″, width of bracelet $1\frac{1}{4}$″.

H. B. ii. 009. a–c. Three stucco relief frs. of drapery, as H. B. ii. 006, but without ends. Through them runs a core of stick wound round with dried grass. (*b*) shows a cross dowel stick. Two grooves define the central gilded band; outer bands are in two shades of blue or green. (*c*) is curved. Soft clay mixed with fibre. $3\frac{5}{8}$″ and $3\frac{1}{2}$″ and $4\frac{3}{4}$″ × $1\frac{1}{4}$″.

H. B. ii. 0010. Stucco relief fr. End of hanging drapery; gilt. Attachment dowel projects sideways. $3\frac{1}{2}$″ × 2″.

H. B. ii. 0011. a–d. Fresco frs. from background to large subject, or diaper for large surface. On light terra-cotta coloured ground is series of seated Buddhas dressed in buff robes banded vertically and transversely with crimson, each band outlined black. Under-robe buff bordered (*a*) with green. Hands seem to rest in lap partly covered by outer robe. Hair with *uṣṇīṣa* black, and all outlines black. Lips pink. Halo to head blue-grey, bordered crimson pink, and green. Vesica green, bordered crimson. Padmāsanas alternately crimson and green, outlined pink and buff respectively. On background between Buddhas is crimson tassel-like lotus from which rise two brown stems crossing and bearing at end of each a leaf. Abraded and broken. (*a*) best preserved. Gr. fr. $7\frac{1}{2}$″ × $7\frac{1}{2}$″.

H. B. ii. 0012. Fresco fr., broken at three edges, the fourth intact, painted on two surfaces. On face part of an oblong label (buff) with fr. of Uigur (?) inscription, illegible. Ground red. Return edge prob. unpainted. 3″ × $1\frac{5}{8}$″.

H. B. ii. 0013. Fresco fr. from edge of wall, showing two painted surfaces. Smaller (return) surface painted plain red; main surface shows yellow border edged with red line and within patches of green and pink. Prob. upper part of Padmāsana. Abraded. $3\frac{1}{4}$″ × $1\frac{3}{8}$″.

H. B. ii. 0014. Stucco fr. from slightly moulded Padmāsana. Hard clay mixed with straw and painted over thick white slip. One edge unbroken, showing return surface. Both painted surfaces are convex, with faint recurve suggested on the front surface. Two petals of lotus remain. One has been green with shaded pink centre, and the adjoining one (which comes on the angle) has red centre bordered with black and white (?). A pink sepal shows between the two. Background red. 3″ × 3″.

H. B. iii. 001. Wooden statuette of Buddha, seated in meditation on three-tiered throne. Roughly carved, with front and sides only finished, and back flat for attachment to wall or other surface by dowels, some of which remain. An additional tongue-shaped piece of wood, prob. originally rising from base now lost, is pegged into corresponding hollow at lower part of back. Buddha has elongated ears, pierced, and *uṣṇīṣa*. Folds of robe very conventionally rendered by series of semicircular grooves. The whole was originally painted, thick white slip and traces of red paint remaining in crevices, and traces of black on hair. Much cracked and surface worn. 11″ × $6\frac{1}{2}$″ × $3\frac{7}{8}$″. Pl. CXXXVIII.

H. B. iv. 001–2. Two stucco relief frs. of arm, life-size. From bracelet (lost) hang chains ending in palmetta or fleur-de-lis orns., gilded. Companion to H. B. iv. 006. Soft clay mixed with fibre and straw; core missing. Length *001*, $5\frac{1}{2}$″; *002*, $2\frac{3}{4}$″; diam. 3″. *002*, Pl. CXXXIX.

H. B. iv. 003. Stucco relief fr. of lotus rosette. Traces of vermilion. Soft clay mixed with fibre. Diam. $1\frac{3}{4}$″.

H. B. iv. 004. Stucco relief fr. of intricately curled floral tendrils. Soft clay mixed with fibre. Gr. M. 3″.

H. B. iv. 005. Fr. of carved wooden relief, showing gilded spiral. Bad condition. $1\frac{5}{8}$″ × $1\frac{1}{4}$″.

H. B. iv. 006. Stucco relief fr. of arm with appliqué bracelet and hanging pendants, bead string with fleur-de-lis ends; gilded. Bad condition. Pairs with H. B. iv. 001–2. Soft clay mixed with fibre. $7\frac{1}{2}$″ × $2\frac{1}{2}$″.

H. B. iv. 007. Stucco fr. from moulded Padmāsana. One petal remains, with maroon centre edged with light terra-cotta, and outer part of blue lightening to grey. Ground light terra-cotta. 3″ × $2\frac{3}{4}$″.

H. B. iv. 008. Fresco fr., showing part of black field with curved edge bounded by green conventional wreath outlined black. On the black are two trefoil scrolls in buff; wreath has buff cincture at narrowest part. Outside this is dirty brown border with red markings, and beyond fr. of white. Much abraded. Clay mixed with fine fibre. $5\frac{1}{2}$″ × $3\frac{1}{2}$″.

H. B. iv. 009. a–b. Two fresco frs., showing on pinkish-buff ground portion of Uigur inscription in black; (*a*) four lines, (*b*) two lines. (*a*) $2\frac{3}{4}$″ × $2\frac{5}{8}$″; (*b*) 2″ × $1\frac{3}{4}$″.

H. B. v. 001. Stucco relief fr. Head of *arhat* (?). No hair modelled, but whole head shows traces of dark paint. Calm smiling expression, ears with quite short lobes. Protuberance on forehead. Soft clay mixed with fibre. Chin to crown $2\frac{1}{8}$″.

H. B. v. 002. Stucco relief fr. R. ear. Short lobe pierced for ear-ring. Soft clay mixed with fibre. Painted bright blue. $2\frac{3}{4}$″ × $1\frac{1}{4}$″.

H. B. v. 003. Stucco relief fr. Lock of hair, closely ribbed, slightly waved. Dark blue. $2\frac{5}{8}$″ × $1\frac{7}{16}$″.

H. B. v. 004. Votive clay relief of seated Buddha, on oval background. Broken above waist, but L. elbow shows. Flame (?) edge to vesica. Lotus throne flat and conventional. Traces of white ground for paint. Cf. Kha. i. 007. Across knees $2\frac{1}{8}$″. Background $3\frac{1}{4}$″ (broken) × $3\frac{1}{4}$″ × $1\frac{1}{8}$″.

H. B. v. 005. Half of votive clay Stūpa model. Conical part is stamped to represent architectural detail, but much worn. Inscription round circular base illegible. Cf. So. a. 006. H. $2\frac{1}{4}$″, diam. $2\frac{1}{8}$″.

H. B. v. 006. Fresco fr. in several pieces from east wall. Shows a white horse trotting to L. Saddle (high-backed) has round flaps (buff) over 'numdah' (green). Coat of rider (?), pink with buff border and bright green lining, hangs down towards back of saddle, and towards front are traces of prob. plate mail with grey lower border. Ornate buff shoe with pointed toe rests in shoe-shaped stirrup supported by green stirrup leathers. Harness buff, adorned with rosettes and streamers, and a large tassel or brush in front of neck. Each leg of horse is adorned between knees and heels with voluminous bows in alternate green and white cloth, the ends streaming backward. Long tail tied in two places; touching it is the hand of a male fig. (attendant) who follows the horse.

This fig. carries a large bow-case and a quiver, and is dressed in tight doublet, with tippet and skirts of tiger skin. Head completely defaced. Behind him stands a celestial female (?) in grey buff-bordered tunic over a long under-robe. Deep sleeves of buff lined with grey hang over wrists to knees, with inner slightly smaller sleeves of white; white girdle knotted in front with ends hanging to ground. The hands held at breast prob. support some offering. Long green scarf hangs over shoulders and forearms. At each hoof of horse was prob. a demon. The yellow face of one remains at R. hind leg, and the long erect hair of others at forelegs. In front of male attendant walks a creature (panther ?) painted brick-red.

Upper edge of fr. burnt and completely defaced; whole surface abraded and much of colour perished or missing. The whole picture outlined with black put over a broader soft grey line. Traces of bright vermilion scattered throughout.

Broken into many pieces, now partially joined. 2′ 4″ × 1′ 1″. Pl. CXXV.

UIGUR MANUSCRIPT REMAINS FROM KICHIK-HASSĀR

H. B. ii. 1. a–b. Two frs. of Uigur MS., on soft light buff paper. (*a*) shows ruled margin of $1\frac{3}{8}$″ at one edge. *Obv.* (*a*) 6 ll., (*b*) 3 ll., very straight, very angular writing, clear and black. *Rev.* blank. Uigur lines well apart, and interspersed with C. A. Brāhmī (?) glosses. (*a*) $4\frac{1}{4}$″ × 3″, (*b*) 3″ × 3″.

H. B. ii. 1. c. Fr. of Uigur (?) MS., on light buff thin paper; straight even hand. *Obv.* 9 ll. in holes. *Rev.* blank. $5\frac{3}{4}$″ × $3\frac{1}{2}$″.

H. B. iii. 1. A mass of small frs. of Uigur MS., with a few Chinese. Writing fairly preserved, but hardly more than a few chars. on any fr. Two largest frs. Uigur (*a* and *b*) show parts respectively of 6 ll. (*obv.* and *rev.*) and 4 ll. (*obv.* and *rev.*). (*c*) shows on *obv.* 2 ll. red as well as 2 ll. black; on *rev.* 2 ll. black. Gr. fr. (*a*) $3\frac{1}{2}$″ × 3″.

H. B. iii. 2. Misc. small frs. of Uigur MS., like the preceding. Black regular writing. Gr. fr. shows parts of 5 ll. *obv.*, 3 ll. *rev.* Gr. M. $3\frac{1}{2}$″ × $2\frac{1}{2}$″.

H. B. iv. 2. a. Fr. of Uigur MS., on soft light buff paper. *Obv.* 5 ll., *rev.* 4 ll., straggling hand. 4″ × $2\frac{1}{2}$″.

OBJECTS ACQUIRED AT YĀR-KHOTO

Y.K. 001. Stucco relief fr. Front of neck of colossal fig., gilded, one end discoloured. In front two shallow grooves. Grey clay and straw faced with red clay mixed with fibre. Core missing. $6\frac{1}{2}$″ × $3\frac{3}{4}$″, thickness $2\frac{1}{4}$″.

Y.K. 002. Stucco relief fr. R. ear, lobe broken. Gilt, discoloured. Clay mixed with fibre. $3\frac{1}{2}$″ × $1\frac{7}{16}$″.

Y.K. 003. Stucco relief fr. prob. from Y.K. 001. Very little gilding left. 4″ × $1\frac{7}{8}$″.

Y.K. 005. Solid-cast gilt bronze statuette of Avalokiteśvara, lacking head and feet. Weight rests on L. leg, R. knee slightly bent, body bent to R. (the left hips prominent) and shoulders nearly sq. Lower limbs draped from waist. Stole looped across breast, carried over R. shoulder and twisted round R. arm reaching to ground; R. arm hangs by side, hand holding flask by neck. L. arm bent at elbow, hand raised to shoulder holding stole (?). Back flatly and sketchily treated. Good work in front. Broken across waist and mended. $1\frac{7}{8}$″ × 1″. Pl. VI.

Y.K. 006. Solid-cast gilt bronze statuette of Avalokiteśvara, complete. Fig. stands on circular base representing double lotus. Legs straight, body leaning slightly to L.; draped below waist. Across breast is stole, which crosses behind, hanging from shoulders in two long ends to feet. R. hand is raised holding it at shoulder; L. hand hangs by side holding flask. Flame-shaped halo. High top-knot; elongated ears. Small tang projecting below base. Detail rough; fair condition. Purchased 29. xi. 07. $2\frac{3}{4}$″ × (gr. width of halo) $\frac{7}{8}$″. Pl. VI.

Y.K. 007. Solid-cast bronze statuette of kneeling fig. Knees wide apart, body very erect, head slightly thrown back; hands held out side by side in front of body, palms upwards, as if supporting gift. Wears stole round neck and shoulders, and robe from thighs down. Armlets on upper arm. High top-knot and normal ears. Casting touched up with graver; originally rough work. Slightly worn. Purchased 26. xi. 07. H. $2\frac{15}{16}$″. Pl. VII.

Y.K. 008. Votive clay Stūpa model; cf. So. a. 006; resembles rather So. a. 009. Base concave instead of convex, top missing. Diam. of base *c.* $1\frac{7}{8}$″, H. $1\frac{1}{8}$″. Pl. CXXXIX.

Y.K. 0013. b. Four-sided wooden pyramid, with flat top and hole pierced vertically through centre. Shallow groove cut out across bottom. One half (vertically) and top, painted red; other side painted black. Interior of hole rough and unworn. H. *c.* $\frac{7}{8}$″, base 1″ × $1\frac{3}{16}$″.

OBJECTS EXCAVATED AT YĀR-KHOTO

Y.K. i. 001. Cast bronze knife-handle (?). Two long straight cases of bronze, semicircular in section and hollow, one end finished square, the other pointed. (One case has lost sq. end.) Outer sides orn. with fine floriate scroll pattern in relief. In each, iron rivet near pointed end; in unbroken case, rivet also at sq. end; in broken, one at middle. Sq. ends are not left open, but are solid, so that edges would meet all round when the two cases were laid upon each other. This however would still allow thin tang of blade to be held between the two. Corroded. Length unbroken $3\frac{1}{4}''$, broken $2\frac{3}{8}''$, width $\frac{3}{4}''$. Pl. VII.

Y.K. iii. 001. Quilted shoe of strong buff cotton (?) fabric; two or three layers sewn together with all-over imbricated scale pattern in buff thread. Sole and uppers in one shaped piece, made up with a join down centre of toes, and a lapped joint sewn with leather thong at back of heel. The double thickness here gives stiffness where most needed. Join at toes, oversewn, and covered with band of silk. Opening strongly overcast and bound with corded blue silk. Small knots seem to have studded sole, and the remains of leather-sewing suggest outer leather sole or patch. Well made. Toe part of sole missing. $8\frac{3}{4}'' \times 3''$.

Y.K. iii. 002. Cast bronze open-work orn., representing undulating horizontal branch of lotus plant, with offshoot of leaves and smaller stems. From three that rise on upper side open three flower-cups, and on each of these sits little gilded Buddha, hands in lap and flame-pointed halo behind head. Fr. from larger piece. Corroded. $2\frac{1}{8}'' \times 2''$. Pl. VI.

Y.K. iii. 003. Wooden key of type Kha. v. 006, broken at handle end. Three peg-holes, one with peg and small additional splinter to tighten it. Key split through third hole to end, near which it has been notched and bound up. Semicircular notch also cut out of end. $3\frac{7}{8}'' \times \frac{11}{16}''$.

Y.K. iv. 001. Stucco relief fr. Face of Buddha, over life-size. Broken off round line of hair and ears; also part of R. cheek. Eyes narrow, oblique, and arched; mouth small, with well-formed lips and deeply indented corners. The whole painted pink, and eyeballs subsequently white. Holes for pupils, now empty, prob. filled in with stone or paint. Immediately below under lip is round hole, about which are remains of white paint covered with blue. Soft clay mixed with fibre. Surface of nose, forehead, and L. side of face gone. Length $10\frac{1}{2}''$, breadth above eyes $8''$.

Y.K. iv. 002. Stucco relief fr. Lower arm and hand (to knuckles). On wrist a double-hoop bracelet with clasp, and over back (?) of hand orn. of which two rosettes remain. Remains of pink paint over flesh, light green on orns. Soft clay mixed with fibre. Stick core. Length $6\frac{1}{8}''$, with core $8\frac{3}{4}''$, diam. of arm $2''$.

Y.K. iv. 003. Stucco relief frs. Seven curls from Buddha head. Cone-shaped, moulded as spirals, painted black. Soft clay. Average length $\frac{3}{4}''$, diam. of base $\frac{3}{4}''$.

Y.K. iv. 004. Stucco relief fr. of drapery, painted light red. Straight overfall over looped folds. Soft clay mixed with straw. *C.* $9'' \times 4\frac{7}{8}''$.

Y.K. iv. 005. Stucco relief fr. L. ear, with elongated lobe (broken). Painted pink, with remains of white on lobe. Pink clay. $3\frac{5}{8}'' \times 1\frac{1}{2}''$.

Y.K. iv. 006. a–f. Six frs. of gilt fresco. Clay mixed with fibre, covered with white lime plaster $\frac{1}{16}''$ thick, and gilt on top. Fairly well preserved. Faint traces of red and black paint on some frs. From $2''$ sq. to $5''$ sq.

Y.K. iv. 007. Fresco fr. Shows shoulders to waist of male fig. slightly to L., in close-fitting doublet of light terra-cotta, with crossed baldric and arm-bands of white. Dark maroon scarf appears over L. shoulder and R. arm. L. hand bent up before breast, holding spear (?). R. arm also slightly extended and bent up at elbow, but hand lost, as is also R. shoulder. Over forearm appears greyish-white drapery, and on breast necklace with white jewels; all outlines black. Surface gone in top L. corner. Soft clay mixed with straw. $4'' \times 3''$.

MISCELLANEOUS MANUSCRIPT FRAGMENTS ACQUIRED AT YĀR-KHOTO

Y.K. 0010. Three frs. of Chin.-Uigur MS. purchased 29. xi. 07. Whitish buff paper. *Obv.* part of Chin. Buddhist Sūtra; firm black chars. *Rev.* broken ll. of Uigur (seven on largest fr.); pale ink, large even hand. Gr. fr. $4'' \times 5\frac{1}{2}''$.

Y.K. 0011. Six frs. of Uigur MS., on soft buff paper, much decayed; bought at Yār-khoto 29. xi. 07. *Obv.* broken ll. Uigur (six on largest fr.), in black ink, firm regular hand. Gr. fr. $7'' \times 3''$.

Y.K. 0012. Five frs. of Uigur MS., on soft light buff paper somewhat decayed; bought at Yār-khoto 29. ix. 07. *Obv.* broken ll. of Uigur (four on largest fr.), in large hand, well separated columns, black ink; with two impressions in red of Chin. (?) seal. Gr. fr. *c.* $5'' \times 3''$.

Y.K. 0013. a. Half of circular wooden saucer, flat-bottomed, roughly cut; with much-worn traces of Uigur writing in black on bottom—4 ll. inside, 5 out. Two holes bored through edge, one filled with fr. of string. Brought as from shrine near N. end of Yār-khoto. Diam. $4''$.

Y.K. 0014. Uigur paper document, on brownish paper showing 'laid' marks; worm-eaten in places, but fairly complete. *Obv.* 19 ll. black writing; somewhat hasty; with two black seal impressions (?), one in middle and one at end. *Rev.* one l. larger hand. $13'' \times 12\frac{1}{2}''$.

Y.K. 0015. Fr. of Uigur MS. on soft light buff paper. *Obv.* 19 ll. rather small writing, clear and black. *Rev.* 18 ll. $6\frac{1}{2}'' \times 5\frac{1}{2}''$.

Y.K. 0016. Fr. of Chin.-Uigur MS. on thin whitish paper; incomplete all edges; writing well preserved. *Obv.* 6 ll. Chin. *Rev.* 8 ll. Uigur. $4\frac{3}{4}'' \times 4\frac{1}{4}''$.

Y.K. 0017. Three frs. Uigur MS., on thick brownish paper. *Obv.* (gr. fr.) 15 ll. Uigur somewhat faded; smaller frs., prob. belonging, parts of 5 and 4 ll. *Rev.* in all, blank. Gr. fr. $4\frac{1}{2}'' \times 8''$.

Y.K. 0018. Three frs. of Uigur MS., on smooth brownish paper; clean and well preserved; all edges incomplete. *Obv.* (gr. fr.) 5 ll., other frs. 4 and 4 ll. writing; regular, well-spaced lines. *Rev.* in all, blank. Gr. fr. $5'' \times 2\frac{1}{2}''$.

Y.K. 0019. a–d. Four frs. of Uigur or Chin.-Uigur MSS., prob. from different MSS. (*a*) Light buff, smooth paper. *Obv.* parts of 8 ll. Chin. apparently from treatise on names of Buddhas. *Rev.* parts of 9 ll. Uigur, rather faint. $5\frac{1}{2}'' \times$ (average H.) $2\frac{1}{2}''$. (*b*) Light brown paper. *Obv.* 5 ll. Chin., good hand and good condition. *Rev.* 5 ll. Uigur, rather faint. $4'' \times 2\frac{3}{4}''$. (*c*) Thin brownish paper. *Obv.* 2 ll. Chin., large, clear. *Rev.* 5 ll. Uigur, somewhat worn. $2'' \times 4''$. (*d*) *Obv.* Uigur only, parts of 4 ll. *Rev.* blank. $2\frac{3}{4}'' \times 1\frac{3}{4}''$.

OBJECTS FOUND OR ACQUIRED AT VARIOUS TURFĀN SITES

Toyuk. 001. (Barat hill). Stucco relief fr. Torso of male fig. R. shoulder and breast bare. Over L. shoulder and under R. arm passes robe that covers rest of body. Flesh pink, robe red. Broken at neck and hips, R. arm at biceps, L. arm at elbow. Rather rough work. Clay mixed with fibre. $4\frac{1}{2}'' \times 4\frac{1}{4}''$.

Kara-khoja. 001. Solid-cast bronze statuette of standing Buddha. Wears long robe down to ankles, and upper robe covering both shoulders and arms and clinging close to front of body and limbs. Folds indicated by conventional incised curves. R. arm hangs by side; L. upraised to shoulder, but hand broken off. Uṣṇiṣa; slightly elongated ears; no halo. Back without detail.

Stands on hollow conical base formed of regular lotus pedestal resting on circular stepped throne.

Condition good. Purchased 20. xi. 07. H. $3\frac{7}{8}''$, diam. of base $1\frac{3}{8}''$. Pl. VII.

Sassik-bulak. 001–2. Two votive clay reliefs, pear-shaped, convex behind, bearing impressions from mould of seated Buddha. Ground round Buddha covered with very faint inscriptions in low relief. Bad condition. Cf. Kha. ii. 0067. $2\frac{1}{4}'' \times 1\frac{7}{8}''$. Pl. CXXXIX.

MISCELLANEOUS MANUSCRIPT FRAGMENTS FOUND AT VARIOUS TURFĀN SITES

Toyuk. 002. a–c. Three frs. of Uigur MS., on smooth light buff paper; found below caves, E. group, in refuse thrown out by diggers. (*a*) Inscr. on *obv.* only, 6 ll., black, regular. $3'' \times 3\frac{5}{8}''$. (*b*) *Obv.* 4 ll. somewhat irregular writing; *rev.* parts of 7 ll., small hand, very cursive. $3\frac{1}{2}'' \times 1\frac{7}{8}''$. (*c*) *Obv.* a few chars. Chin.; *rev.* ends of 4 ll., large untidy hand. $4'' \times 1\frac{3}{8}''$.

Toyuk. 003. Three frs. of Uigur MS., on soft buff paper, felted. *Obv.* 7, 5, and 2 ll. somewhat perished. *Rev.* blank. From diggers' refuse as above. Gr. fr. $5'' \times$ (gr. width) $3''$.

Toyuk. 004. Fr. of Chin.-Sogdian (?) MS., on light brown paper. *Obv.* 5. ll. Chin. *Rev.* 7 ll. Sogdian, well preserved. $3\frac{3}{4}'' \times 2\frac{1}{2}$.

Tallik-bulak. 001. Fr. of Uigur MS., on brown paper much decayed; black regular writing. *Obv.* 5 ll., *rev.* 5 ll. *C.* $6'' \times 3''$. Also mass of decayed remains of Chin. and Uigur manuscripts, felted together and illegible.

CHAPTER XXIX

KARA-SHAHR AND ITS RUINED SITES

Section I.—HISTORICAL TOPOGRAPHY OF KARA-SHAHR

Route from Turfān to Kara-shahr.

On December 1 I left Turfān town for Kara-shahr. I was anxious to save time for eventual excavations in that north-east corner of the Tārīm Basin before setting out to the south-west across the Taklamakān, and for this reason was obliged to follow the high road. This first skirts the western portion of the Turfān basin to the oasis of Toksun (Map No. 54. c. 2), and thence ascends southward through the difficult gorge of Su-bāshi to the barren hill ranges and plateaus which link the western Kuruk-tāgh to the T'ien-shan chain south of Urumchi. These the route crosses in a westerly direction over ground where both water and grazing are extremely scanty; after some 140 miles from Turfān it reaches at Ushak-tal the first cultivation within the wide Kara-shahr basin. Apart from a small ruined fort known as Oi-tam in the scrubby salt-encrusted steppe north-west of Toksun (Map No. 54. c. 1), which with its very massive walls of stamped clay looked to me decidedly ancient, the route offered no opportunity for archaeological observations. Yet there can be no doubt that it must have been always the main line of communication from Turfān to Kara-shahr and the northern oases of the Tārīm Basin. Along its eastern portion leads also what must in historical times have always been the easiest, if not the most direct, route connecting Turfān with the Lop region.[1]

Route described in T'ang Annals.

If there are no old remains that can now be traced above the ground along the route just described, we find at least a fairly detailed account of it in the T'ang Annals.[2] M. Chavannes has already rightly recognized that the notice translated by him relates to the present route line, and only minor identifications remain to be added here. Starting from Hsi-chou 西州 or Yār-khoto, the itinerary takes us south-west to the town of T'ien-shan 天山, 120 li distant. In this we can safely recognize the present Toksun. 'Thence going south-west and passing through a mountainous gorge and the stony desert of Lei-shih 礌石', which obviously corresponds to the narrow defile ascended above Su-bāshi, 'one arrives after 220 li in the stony desert of Yin-shan 銀山, or "the Silver Mountain".' The modern Chinese author of the *Hsi yü shui tao chi*, quoted by M. Chavannes, has correctly recognized that the reference here is to the hilly desert near the present station of Kumush, the name of which means silver in Turkī.[3] The distance indicated agrees well with the

[1] I mean the route which leaves the Turfān–Kara-shahr high road at the desolate station of Üjme-dong, Map No. 54. B. 3, and striking due south leads via Shōr-bulak and P'o-ch'êng-tzŭ to the tiny oasis of Singer. From this important route junction of the western Kuruk-tāgh (Map No. 55. D. 2) Lou-lan could be reached in ancient times as easily as the northernmost Lop tract is now at Tikenlik.

The route here referred to will be found duly marked in Roborovsky's Map II from Col. Kozloff's survey. With most other routes of the Western Kuruk-tāgh it was surveyed in the course of my third expedition. It was made practicable for cart traffic after the Chinese reconquest of Turkestān in 1877, and postal stations, now completely abandoned, were established along it. The more direct routes from Singer to Turfān and Lukchun are made difficult, and during the warm portion of the year practically impossible, through want of water.

[2] Cf. Chavannes, *Turcs occid.*, p. 6.

[3] Silver has been mined in the western Kuruk-tāgh also in recent times, but only in modest quantities.

56 miles of my cyclometer, reckoning from Toksun to Kumush. By Lü-kuang 呂光 on the frontier of Yen-ch'i or Kara-shahr, 40 li distant, must be meant a halting-place at or near the present Kara-kizil (Map No. 51. D. 4), where water is obtained from a deep well, and the natural frontier of Kara-shahr, corresponding with the watershed towards the Bagrash Lake, is entered. Thence, beyond the P'an-shih 盤石 tract, the military station of Chang-san-mieh 張三滅 is reached after 100 li more. There can be no doubt that the cultivated area of Ushak-tal (Map No. 51. A. 4) is meant, though the actual road distance from Kara-kizil is over 30 miles. 'Going towards the south-west for 145 li one passes the road station called Hsin-ch'êng 新城 ("the new city") and crossing the Tan 淡 River (the Kara-shahr River) arrives at the garrison town of Yen-ch'i 焉耆.' That by the station of Hsin-ch'êng a place approximately in the position of the present town of Kara-shahr must be intended is made clear by the bearing and distance. The situation of the ancient capital of Kara-shahr will be discussed presently.

Hsüan-tsang's miraculous spring.

We must regret that Hsüan-tsang begins his *Hsi-yü-chi* from Yen-ch'i, or A-ch'i-ni 阿耆尼, as he calls Kara-shahr, but does not describe the route by which he arrived there from Kao-ch'ang or Turfān; for the account we receive of this journey in his *Life*[4] is not as clear as it might have been in the great traveller's own record. M. Chavannes has assumed that he followed the route which the T'ang itinerary describes,[5] and on general grounds this appears probable. But obscurities of detail remain, and it must be remembered that the present high road is not the only route by which to reach Kara-shahr from Turfān.[6] If Hsüan-tsang followed the main route, which certainly is the easiest, I think that we may identify the miraculous 'spring of the Master A-fu', about the origin of which the *Life* tells a lengthy legend, with the remarkable spring which issues from a sheer wall of rock in the deep gorge passed by the route about a mile below the station of Arghai-bulak (Map No. 54. B. 3), and from which this derives its name. There is no water to be found elsewhere on the route above this point until Kumush. But it must be mentioned that the *Life* describes the spring as issuing from a 'monticule de sable, au sud de la route', whereas the *Arghai-bulak* issues from a cliff of what seemed to me granite or gneiss, and flanking the route on the west. On the other hand, the statement that the Master, after passing the night with his companions by this spring, started by daybreak and traversed, evidently the same day, 'the Yin-shan or "mountain of silver", which is very high and large', would well accord with the long march by which the elevated plateau above mentioned is crossed from Arghai-bulak to Kumush. That the pious pilgrim was attacked by robbers when proceeding west of this mountain would well agree with the topography of the route beyond Kumush; for the broken ground crossed there would specially facilitate such exploits from the higher valleys north which afford fair grazing for nomads.[7]

Position of Kara-shahr district.

My stay in the Kara-shahr region was too short and the extent of the ground that I actually visited, away from the line of the main route and certain ruined sites, too limited to justify my attempting here either a systematic survey of its geography or a review of the data we possess regarding its early history. But among the geographical features distinguishing the Kara-shahr territory there are some so striking, and of such obviously great importance as determining its history, that a brief account of them seems called for here.

Kara-shahr in some respects occupies a unique position among the districts comprised within the Tārīm Basin. Immediately adjoining from the north-east the great flat trough which extends in

[4] Cf. Julien, *Vie*, pp. 46 sqq.

[5] Cf. Chavannes, *Turcs occid.*, pp. 6 sq.

[6] Another route through the mountains further west was followed by Roborovsky (see his Map II), and there may be more in the hills south-west of Toksun.

[7] Up to the pass above Arghai-bulak (Map No. 54. B. 3) the route in the gorge is protected from sudden attacks on either side by the impracticable nature of the flanking ridges. Beyond it as far as Kumush the ground is for the most part a bare gravel 'Sai' precluding all surprise.

the middle of the latter, and which the Tārīm traverses along its whole length from east to west, it sends all its drainage towards the Tārīm delta and yet forms a distinct basin by itself. This Kara-shahr basin, as any general map shows, is enclosed on the north by a range of the central T'ien-shan system which stretches from the western rim of the Turfān depression west towards the Yulduz plateaus. On the east and south it is framed round by barren hill ranges of the Kuruk-tāgh. In the west these link on to that southernmost T'ien-shan range which edges the riverine flat of the Tārīm from Korla towards Kuchā. Between the foot of this range and the westernmost offshoot of the Kuruk-tāgh lies the narrow defile above the Korla oasis in which the river draining the lake of Kara-shahr, or the Baghrash-köl, breaks through to the plains of the Tārīm.

Great lake of Kara-shahr basin.

The great lake forms the chief and most characteristic feature of the Kara-shahr basin. With its marshy edges it extends, according to Roborovsky's reliable surveys, for a distance of over 50 miles from east to west with a maximum width of about 30 miles. It is nowhere of great depth, but holds fresh water for the greatest portion of its area and abounds in fish. Its water is supplied mainly by the Khaidu-gol, a considerable river which drains the Yulduz plateaus and the high T'ien-shan ranges around them. The volume of this is increased above Kara-shahr by an affluent from the north which drains distant snowy mountains between Kara-shahr and Urumchi.[8] The valley of the Khaidu-gol is of great width for a distance of over 60 miles above the town of Kara-shahr and forms an important extension of the basin north-westwards.

Abundance of water.

It is the abundance of water which is, perhaps, the most distinctive feature of the district. This is sufficiently indicated by the great area covered by its freshwater lake and by the large and practically permanent volume of water which the lake discharges in the Konche-daryā flowing through the defile above Korla.[9] As far as my observations go, there is no area of corresponding size in the Tārīm Basin which commands a water-supply so abundant and so easy to utilize for irrigation. To this advantage is added a climate which, judging from a variety of observations, including personal experience during my stay at the site north of Shōrchuk, appears to be appreciably moister than that of the oases along the northern edge of the Tārīm Basin or to the south of the Taklamakān. The conditions here briefly indicated are reflected in a striking manner by the great belt of vegetation excellently suited for winter grazing which encircles the Baghrash Lake almost everywhere,[10] and extends on all sides close to the foot of the mountains.

Cultivation limited and neglected.

With conditions so favourable for cultivation, and with the great extent of ground which canals from the Kara-shahr River could command in the north-western portion of the basin, the very limited number and size of permanent settlements to be found at present in the district contrast in a fashion which is bound to attract attention. Wherever I moved in the Kara-shahr basin, I was struck by the disproportion between the scanty area of cultivation, which was, too, mostly neglected, and the great extent of arable land awaiting occupation. It was easy to realize the connexion between this state of things and the strangely mixed nature of the population. It consists in the main of Mongols who have only recently taken to agriculture and still continue to lead a semi-nomadic existence at the same time; of Chinese settlers introduced since the reconquest; of Tungan colonies forcibly planted here still more recently, and a very slight admixture of Turkī Muham-

Mixture of population.

[8] The debouchure of this affluent of the Khaidu-gol is shown in Roborovsky's Map II in a position approximately corresponding to the valley marked in Map No. 48. A. 2, between the clinometrically fixed heights 12391 and 11211. The valley was sighted by R. B. Lāl Singh from a great distance. Hence its continuation northward, formed by a deep-cut winding gorge, remained unnoticed and has not been correctly indicated in our map.

[9] Cf. Hedin, *Reisen in Zentral-Asien*, p. 68, where the volume of the river, even after the not inconsiderable loss due to canals taking off above Korla town on either side of the river, is estimated at about 72 cubic metres per second.

[10] For this belt of luxuriant reed-beds, scrub, and Toghrak jungle, north of the lake, see Maps Nos. 48, 51. A survey of 1915 showed it also along the south shore, though in lesser width.

madans, mainly petty traders, from the northern oases of the Tārīm Basin. Everywhere in the mountains to the north live Mongols who continue in their traditional ways as nomads, known to Muhammadans as Kalmaks and belonging to different Torgut tribes. It is the vicinity of these troublesome nomad neighbours, whose turbulent nature and robbing propensities Chinese reports of the eighteenth century on Kara-shahr duly emphasize,[11] which has kept Turkī cultivators away from such fertile lands. The same reports also show us that Kara-shahr has suffered from its present conditions of depopulation and neglected agriculture ever since the great inroads of the Dzungars in the last century drove out the old population of Turkī Muhammadans.

Exposure to nomad attacks.

These observations on the present conditions of Kara-shahr will make it quite clear that, while the territory has been favoured by nature in various ways, its geographical position must at all times have exposed it to a very serious drawback. I mean its close vicinity to, and its easy access from, mountain tracts which, as far back as history takes us, have always had a particular attraction for nomads. It is unnecessary here to explain in detail how the famous grazing uplands of Yulduz have been cherished haunts for all the great nomad nations, from the Wu-sun and Huns downwards, which held sway along the T'ien-shan, that natural *spina*, as it were, in the cycle of Central-Asian migrations. Situated as Kara-shahr is at the very mouth of the big valley leading down from Yulduz, it must have been like a gate specially inviting those who had their favourite summer camps on those grassy plateaus and necessarily looked to the oases on the south as their richest grounds for raids and exactions. Whenever Chinese power was firmly established from Turfān to Kāshgar or beyond, the gate might be kept safely closed. The same is likely to have been possible during periods while internal feuds or conflict with nomad aggressors weakened the tribes in the north. But the danger must always have been close at hand, and from time to time Kara-shahr was bound to suffer from its onset. The oases further west would then be exposed, too, to plunder and heavy exactions of tribute. But the additional risk of prolonged occupation would be reserved for Kara-shahr, which alone could offer grazing grounds adequate for the maintenance of large nomad hosts.

***Yen-ch'i* in early Chinese records.**

The peculiar circumstances just explained as a result of geographical features must be kept in view if we are to understand properly the part played by Kara-shahr in the early history of what is now Chinese Turkestān. It does not appear to have ever been as important as that of Kuchā, Kāshgar, Khotan, or Yārkand, either in political respect or with regard to Buddhist culture and all that was connected with it. It is true that Yen-ch'i figures in the description of the 'Western regions' given by the Former and Later Annals as a territory with a relatively large population.[12] But the records also show that its political fate was always closely bound up with that of its more powerful neighbours on the west and east, Kuchā and Turfān. The Later Han Annals' account duly notes that the territory 'on four sides has high mountains which attach themselves to those of Kuchā. The roads [leading there] are blocked with obstacles and are easy to defend.' The last remark obviously refers in particular to the routes which gave access to Yen-ch'i from territories under Chinese control. True also is the statement about 'the water of a lake which spreads in sinuosities within the four mountains', and what is said about the position of the capital, as we shall see presently. The Chin Annals' notice of Yen-ch'i repeats the essential points of the above description and emphasizes the difficulty of the routes leading to it by adding that 'if a hundred men defend them a thousand could not pass'.[13]

[11] Cf. Ritter, *Asien*, ii. p. 436, where the natural fertility of the land, its former flourishing condition, and the inability of the Mongols to turn its advantages to good account are all quite correctly noted from the Chinese records.

[12] Cf. Wylie, *J. Anthrop. Inst.*, xi. pp. 101 sq.; Chavannes, *T'oung-pao*, 1907, p. 208.

[13] See Chavannes, *Ancient Khotan*, i. p. 542. The reference is clearly to the difficult defiles of the Turfān route

Fa-hsien's and Hsüan-tsang's accounts.

Fa-hsien, who visited Yen-ch'i, or Wu-i 傷夷 as he calls it, about A.D. 400 from Shan-shan, has little more to tell us about it than that there were four thousand monks, students of the Hīnayāna, in the territory.[14] Nor is the account which Hsüan-tsang has given of it as detailed as that of Kuchā and other more important districts.[15] The description of the physical features seems borrowed from the Later Han Annals. But the pilgrim particularly notes the abundant irrigation, the varied products of the soil, and the genial climate. He found there about two thousand monks of the Sarvāstivādin school, attached to the Hīnayāna, in about ten monasteries, and calls the people honest.

T'ang Annals' notice of *Yen-ch'i*.

In the fairly long notice which the T'ang Annals devote to Yen-ch'i and its affairs we are specially told that the territory 'has always been subject to the Western Turks'.[16] The statement is fully illustrated by a variety of events in which Yen-ch'i figured during the period preceding the establishment of Chinese supremacy,[17] and is easily explained by what has been shown above about the geographical position of Kara-shahr. It is, no doubt, the strategic importance of this position which caused Yen-ch'i to be reckoned from A.D. 719 as one of the 'Four Garrisons' assuring the Chinese hold over Eastern Turkestān; for in an imperial decree issued some years earlier we are told that the kingdom was small and its population not numerous.[18] Nevertheless the number of households is estimated in the T'ang Annals' notice at four thousand and the number of soldiers at two thousand, which suggests a population still greatly in excess of the present. The reference made to brisk trade in fish and salt, however, still holds good.

Ruined circumvallation of *Chong-köl*.

We may safely attribute it to the relative abundance of moisture and the consequent more rapid decay of ruins that the number of sites in the Kara-shahr district with ancient remains above the ground is small. The first that I visited was the ruined circumvallation, known as *Chong-köl* ('the big lake') or as *Ta-lao-pa* to the local Chinese, about six miles to the south-east of Ushak-tal (Map No. 51. B. 4). It is situated amidst luxuriant jungle of scrub and Toghraks only a mile beyond the limits of the present cultivation, and abandoned fields adjoin it quite closely. The circumvallation forms an oblong with its corners approximately orientated, the south-west face measuring about 270 yards and the south-east one about 308 yards. Its walls, originally built of stamped clay, are now decayed into ramparts of earth showing in places irregular layers of brushwood or reeds and still rising to 20–25 feet, with a thickness of about 15 feet at the top. They are strengthened at irregular intervals by towers of stamped clay. Moisture has affected the slopes and covered the surface of the interior with a thin crust of salt efflorescence, or *shōr*. Of structural remains there were none visible in the interior, the only notable feature being a refuse-covered mound near the north-east rampart. Superficial clearing brought to light only straw of reeds and cereals, mixed with stable refuse and wood chippings. But on the south-west rampart a well-preserved copper coin with the *nien-hao* Ch'ien-yüan (A.D. 758–60) was picked up from the surface. The conditions of the ground gave little hope of archaeological finds, and the fortified enclosure, though most probably

and the 'Iron Gates' of the gorge above Korla, regarding which see below, p. 1228.

The same notice of the Chin Annals contains an interesting account of the career of Prince Hui 會, the son of a chief of Yen-ch'i and his wife from the Kuei Hu 獪胡 tribe, who made himself master of Kuchā and subsequently for a time established a hegemony over the whole of the Tārīm Basin, about the end of the third century A.D.

[14] Cf. Legge, *Travels of Fâ-hien*, pp. 14 sq. For the name *Wu-i* (also written *Wu-ch'i* 傷耆 in other Buddhist texts), cf. Watters, *Yuan Chwang*, i. p. 46; Chavannes, *T'oung-pao*, 1905, p. 564, note 2. Wu-k'ung, who stayed at Kara-shahr about A.D. 788, also calls the town *Wu-ch'i*; see *J. Asiat.*, 1895, sept.-oct., p. 364.

[15] Cf. Julien, *Mémoires*, i. pp. 1 sq.; Watters, *Yuan Chwang*, i. pp. 48 sqq.

[16] Cf. Chavannes, *Turcs occid.*, pp. 110 sqq.

[17] Cf. Chavannes, *ibid.*, Index, s.v. *Yen-k'i*.

[18] See Chavannes, *loc. cit.*, p. 113. The other of the 'Four Garrisons' were Kuchā, Kāshgar, and Khotan, all territories of far greater resources.

of pre-Muhammadan origin, is likely to have been occupied intermittently also during later periods.[19] A large cave, the position of which was pointed out to me at the foot of the hills overlooking the debouchure of the Ushak-tal stream, about three miles to the north-west of the village, was said to have been examined by Professor Grünwedel. The short winter day left no time to see it on my way to Chokkur.

Ruined enclosure at *Chokkur.*

The ruin reported at the last-named place (Map No. 48. D. 3) proved to be a small walled enclosure of a type similar to that at Chong-köl. Towers of stamped clay, mostly about 25 feet by 19, strengthened the curtains at short intervals. The walls of the latter seemed to have had a thickness of only 7 feet, covered now on both slopes with masses of fallen clay. No structural remains had survived in the interior, and diggings carried on for manuring soil showed that whatever buildings it might once have contained had crumbled away into mere earth. A mound of earth, about 50 feet in diameter, seemed to mark the position of some central structure. The ruined fort stands in the middle of a small but well-irrigated area of cultivation, and around it stretch luxuriant Toghrak jungle and grazing. It was through ground like this, or equally luxuriant reed-beds where the shores of Lake Baghrash lay nearer, that the thirty miles' march led me to the town of Kara-shahr on December 8.

Site of *Baghdād-shahri.*

From this place I visited the ruins of Baghdād-shahri, the only old site in the neighbourhood of which information was obtainable, apart from the 'Ming-oi' near Shōrchuk. The way led along the high road towards Korla which crosses the wide river-bed about half a mile from the town and then passes a wide steppe with fertile soil and scattered patches of new cultivation. Water for more canals is available in plenty, and only want of population prevents an oasis being created on the river's right bank far bigger than the one adjoining the present town. The Baghdād-shahri site, about nine miles distant from the latter, lies close to the eastern edge of a long but narrow stretch of cultivation of which the roadside station of Danzil is the centre (Map No. 49. B. 1). Its remains consist of a large oblong circumvallation, which undoubtedly marks the position of a town of importance.

Remains of walled town.

The corners of the town walls are approximately orientated; the north-west face measures about 1,030 yards, that to the south-west about 935 yards. The walls, everywhere badly decayed except near the west corner, appear to have been built throughout of layers of stamped clay 3 inches in height and to have had a thickness of about 9 feet. They rest on a broad earth rampart, rising 12–15 feet above the adjoining ground. Apart from a large mound of stamped clay of uncertain character, rising within the north corner of the circumvallation to a height of 25 feet or so and about 20 yards across on its flat top, the interior of the town retains no structural remains whatsoever. The whole of it is occupied by salt-encrusted low ridges and hillocks, with a large earth mound of the same shapeless appearance a short distance off the middle of the south-west face. Remains of a square wall, apparently of late date, were traceable on its top. There was found on the surface a well-preserved coin with the *nien-hao* Ch'ien-chung (A.D. 780–4), together with plenty of coarse pottery on the slopes. Fragments of a T'ang coin, apparently a *K'ai-yüan* piece, were picked up on the top of the previously mentioned mound.

Site of ancient capital.

A look at the salt-permeated soil sufficed to show that percolation from below and subaerial moisture must have destroyed here all remains except those of the hardest water-resisting materials. For systematic excavations such a site could hold out little hope, and the mere fact that no 'treasure-seeking' was practised at the site by any of the inhabitants of the hamlets close by confirmed this impression. But even in the absence of direct archaeological evidence there is much to support the belief that the walled town of Baghdād-shahri marks the site of the Kara-shahr capital, at least as it existed in T'ang times. From the itinerary of the T'ang Annals discussed above we have seen that

[19] For specimens of pottery, including one obviously Chinese, with transparent celadon green, see the List below.

the position of this must be looked for beyond the right bank of the Kara-shahr River.[20] Another passage of the Annals confirms this and clearly shows that the capital must have been situated close to the shores of the Baghrash Lake, which is said to have protected it, at least partially, from attack.[21]

Vicinity of lake.

It is true that this passage estimates the circumference of the locality where the capital stood (not of the walled town itself) at 30 li, a measure much in excess of the actual perimeter of Baghdād-shahri. But, on the other hand, we have a very close approach to the two miles or so of the latter in Hsüan-tsang's statement that the circuit of the capital he visited was 6 to 7 li. That the site of Baghdād-shahri lies quite close to the marshy edge of Lake Baghrash is certain, though at the time of my visit it was difficult to determine the exact shore line on the *shōr*-covered flats extending to the south and east of the site, the lake being frozen at the time and shrunk to its winter limits.[22] Chinese local opinion at Kara-shahr—whether based on tradition or on learned argument I could not find out—ascribes the ruined town to T'ang times, and the two coins actually found by me at the site distinctly support this view. But what appears to me to carry most weight are the topographical indications of the T'ang Annals and Hsüan-tsang, and the fact that no trace exists of any other ruined circumvallation by the western shores of the lake.

OBJECTS FOUND AT SITES OF CHONG-KÖL (USHAK-TAL) AND BAGHDĀD-SHAHRI, KARA-SHAHR

Ushak-tal. 001. Fr. of pottery, hand-made from well-levigated clay, grey burning to brick-red; hearth-burned. Apparently had ochreous wash on outer surface; worn. $2\frac{1}{2}" \times 1\frac{7}{8}"$.

Ushak-tal. 002. Fr. of pottery, wheel-made, kiln-fired, sulphur-yellow clay; outside face washed reddish-brown; orn. with appliqué leaf(?) pattern. $2\frac{3}{16}" \times 2\frac{1}{16}"$.

Ushak-tal. 003. Fr. of rim of stoneware bowl, grey body with transparent celadon green glaze on either side; incised orn.; a combed-wave pattern inside, and a plain band outside. Chinese. $1\frac{3}{4}" \times 1\frac{5}{8}"$.

Ushak-tal. 004. Fr. of bluish-white translucent glass; all faces broken. Gr. M. $1\frac{3}{4}"$.

Baghdād-shahri. 001. Fr. of pottery, hand-made, body of dull red-burning clay covered with a black-burning slip *c.* $\frac{1}{20}"$ thick; this prob. blackened by smothering which has not affected clay of body. Along top applied relief band (black) with V-shaped stamped orn. $1\frac{7}{8}" \times 1\frac{5}{8}"$. Pl. IV.

Baghdād-shahri. 002. Fr. of pottery, hand-made, of fairly well-levigated clay burning a light brick red, kiln-fired. $1\frac{9}{16}" \times 1\frac{1}{2}"$.

SECTION II.—THE 'MING-OI' SITE NORTH OF SHŌRCHUK

Arrival at ruins.

On December 11 I left Kara-shahr town and proceeded by the Korla high road to the little station of Shōrchuk, some 16 miles to the south-south-west.[1] From it I visited on the same day the extensive collection of Buddhist shrines situated close on four miles to the north and known to the Turkī-speaking Muhammadans by the general designation of *Ming-oi*, the 'Thousand Houses'. The site, which from the north-west is approached to within three miles or so by the scattered

[20] See above, p. 1176.

[21] Cf. Chavannes, *Turcs occid.*, p. 112. The description of the position of the town corresponds closely to that given by the notice of the Later Han Annals; see Chavannes, *T'oung-pao*, 1907, p. 208: 'L'eau d'un lac entre en sinuosités à l'intérieur des quatre montagnes et environne cette ville sur une distance de plus de trente li.'

The passage of the T'ang Annals above quoted describes the sudden attack by which the Chinese general Kuo Hsiao-k'u, marching against Yen-ch'i from the side of Turfān by the main route, took the capital in A.D. 644. The description shows clearly, first that the river had to be crossed before arriving at the capital, and secondly that the town was open to assault on the land side. The whole suggests that the town was built on a small peninsula projecting into the lake.

[22] The careful survey which Roborovsky, as topographer of General Pievzoff's expedition (1889–90), made of Lake Baghrash shows Baghdād-shahri as situated immediately to the north of a small bay of the lake. This indicates that when the level of the lake is high the site is protected on two sides at least by water.

[1] See Map No. 49. B. 1. *Shōrchuk* may be accepted with Professors Grünwedel and Pelliot as the correct form of the local name, derived as it obviously is from *shōr*, the Turkī term for the salt efflorescence which is plentiful on the steppe around. But the prevailing pronunciation I heard from the Korla Bēgs and labourers with me sounded *Chōr-chuk*, the name shown in the map.

Mongol cultivation of Shikchin, had received visits from several European travellers, including Dr. Hedin.[2] I knew that Professor Grünwedel had on two occasions in 1906–7 made stays of several weeks at Shōrchuk for the sake of the ruins. But information received at Turfān indicated that his work and that of his party had been mainly devoted to the cave-temples north of the main site, and a rapid inspection of the latter soon convinced me that ample scope was left here for systematic excavations. It also showed that local conditions would allow them to be carried on rapidly. So no time was lost about pitching camp in the midst of the ruins and arranging for adequate labour.

Position of ruins.

The ruins of the main site, as seen in the photographs, Figs. 281–5, occupy the tops, and in places also the slopes, of small gravel-covered ridges and plateaus of sandstone rising above the loess plain. These represent the last offshoots from the range which flanks the valley of the Khaidu-gol on the south. The site plan, Plate 51, shows that these slight but well-defined elevations stretch all from north-west to south-east, bearing ruins for a total distance of about one-third of a mile. The width of the area occupied by structural remains varies from two to three hundred yards. About its middle the area is divided into a north-western and a south-eastern portion by a small transverse depression. Here a tiny stream fed by two marshy springs rises in a gap at the foot of the two westernmost ridges and makes its way eastwards, soon to disappear in the soft scrub-covered loess of the plain. The same depression (seen in the middle of Figs. 281–3) also drains the shallow little Nullahs which separate the several ridges and terraces.

Disposition of ruins.

Of the latter three can be easily distinguished to the south-east, each bearing rows of closely serried structures, marked as groups I–III in the plan.[3] To the north-west the disposition of the ruins is far less regular. A large group of shrines, xi–xvii, including several massive temple ruins, attracts attention on the central terrace overlooking the transverse depression. On the gentle slopes to the north of it, and on narrow knolls descending to the east and south, there are scattered numerous other structures mostly of modest size.[4] The westernmost ridge, being steep and very narrow on its top, is occupied only by a couple or so of small cellas, one of them immediately above the springs.

Cave-temples previously explored.

The cave-temples already referred to are situated about three-quarters of a mile to the north-west. All with one exception cluster close together at the foot of the steep western slope of a higher sandstone ridge (Plate 51) of which the ridges and terraces on the main site form the south-eastern continuation. For all details as to the position and character of these cave-shrines, nine in all, adjoining some cavities which were probably rock-tombs, I may refer to the publication of Professor Grünwedel, who completely explored them and has described them with great care and thoroughness.[5] Of relatively small size and badly injured by vandal hands, they still retained fresco remains and relievo fragments of great iconographic interest.

Arrangements for searching ruins.

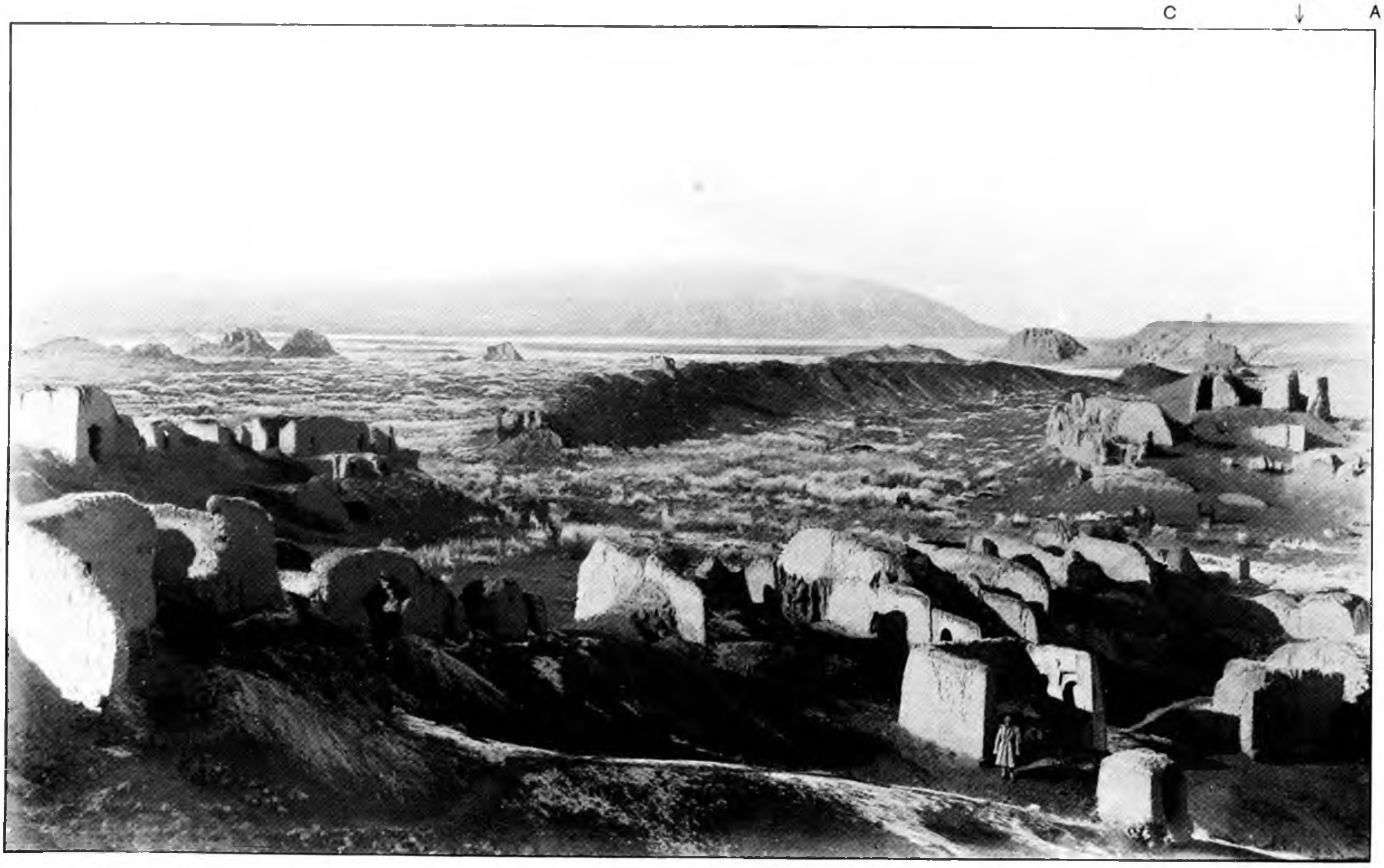
The very large number of ruined structures at the main site, the considerable size of many among them, and the heavy labour demanded by the excavation of the interior of the bigger temples, filled not with drift-sand but with consolidated masonry débris, made it obvious from the outset that within the time I could spare for this big site no attempt could be made to clear the whole of the ruins. In order to assure desirable thoroughness in the search of individual ruins, limitation in

[2] For a brief description, mainly of the caves, see Hedin, *Reisen in Z.-A.*, p. 67.

[3] Fig. 281 shows portions of groups I and II, as seen from the south. The same appear also in the background of Fig. 274 viewed from the west. In Fig. 283 are seen parts of groups II and III with a cluster of domed structures at the east foot of the third ridge.

[4] In Fig. 285 is seen the whole of the central group as viewed from a distance in the south. Figs. 281–2, which join up, show the whole of the north-west portion of the site in the background. Two of the big temple ruins of the central group are shown from the west in Fig. 284, while some of the scattered shrines to the north and east appear in Fig. 287.

[5] See Grünwedel, *Altbuddh. Kultstätten*, pp. 192–211.



281. PANORAMIC VIEW OF 'MING-OI' SITE, SHŌRCHUK, TAKEN FROM SOUTH NEAR TEMPLE Mi. xxvi.
Ruined shrines of groups I and II in foreground, with temple x–xii on right and site of cave temples (C) in distance behind. A B marks line of joining.

282. PANORAMIC VIEW AS ABOVE CONTINUED TO NORTH END OF GROUPS I AND II IN FOREGROUND WITH SHRINES OF CENTRAL GROUP IN NORTH-WEST PORTION ON LEFT.
A B marks joining line.

III II

283. RUINED SHRINES OF GROUPS II AND III IN SOUTH-EAST PORTION OF 'MING-OI' SITE, SHŌRCHUK, SEEN FROM WEST.

xiii x-xii

284. CENTRAL GROUP OF RUINED SHRINES Mi. x-xiii IN NORTH-WEST PORTION OF 'MING-OI' SITE, SHŌRCHUK, SEEN FROM WEST.

respect of numbers was absolutely necessary. At the same time, as several distinct types could easily be recognized among this multitude of shrines, care had to be taken to make the selection of those to be searched representative. Fortunately it was easy to realize that the disposition of the majority of the ruins in long rows of small adjoining cellas, or in groups of detached shrines equally close together and accessible, would facilitate the employment of a large number of labourers under adequate supervision. To obtain them rapidly and to keep the work going steadily at high pressure was made possible by specially favourable circumstances.

Effective administrative help. At Kara-shahr I had entered again the great division of districts over which my old friend and patron P'an Ta-jên exercised control as Tao-t'ai of Ak-su. Thanks to his ever-effective recommendation, Chiang T'ai-chin, the energetic prefect of Kara-shahr, had provided all needful administrative support for my labours. Fortunately, too, the populous village tract of Korla was within a day's march to supply large and willing contingents of Turkī Muhammadans who knew how to use their 'Ketmans'. Pickaxes needed for the hard débris were secured with equal promptness from the Chinese military post at the same oasis. Some of the ruins still retained their vaulted roofs and provided night shelter, such as the men badly needed under the trying climatic conditions prevailing. With the help of efficient village head-men from Korla it was easy to keep these large bands at work from the bitterly cold hours of dawn until nightfall, and to relieve them by fresh relays of men as soon as the effect of long days of strenuous work and of the exposure implied began to tell upon them.

Clearing of shrines. Valiantly aided by Naik Rām Singh, Chiang Ssŭ-yeh, and after his arrival from the Kuruk-tāgh also by R. B. Lāl Singh, I thus managed during my twelve days' stay at the site to get the great majority of the shrines and other ruins cleared, and, as the special mark of the broad arrow used in the plans (Plates 52, 53) shows, in most cases completely. In the few larger temples which are marked as partially cleared, work was stopped only when it became evident, from the condition of the heavy masses of hard calcined débris brought to light, that the inward fall of the thick temple walls after a big conflagration had left but very scanty chance of any remains of interest having survived the combined effects of fire and such a crushing.

Constructive types and materials. The total number of individual shrines at the main site amounts to over a hundred. In their dimensions they vary greatly, from miniature cellas of only 4 to 6 feet square to massive rectangular piles measuring up to 80 feet on one side. But the types of construction represented, as reference to the plans and photographs shows, are few, and much uniformity evidently prevailed also in the arrangement and decoration of the interior. Sun-dried bricks are used throughout these structures. Their prevailing size is about 12″ × 6″ × 3–4″. In the larger shrines a good deal of timber appears to have been set in the masonry to give it greater cohesion. In some of those rising on walled-up terraces, like xvii, xxvi, I noticed also the insertion of thin layers of reeds. All this points to climatic conditions not unlike the present, in which masonry of sun-dried bricks alone does not assure enough strength.

Vaulted temple cellas. It will be convenient first to describe only the most frequent types briefly in their general features and to leave the mention of details till we deal with individual ruins. The commonest type among the small shrines is the simple cella, either square or rectangular, usually ranged by the side of others on a terrace and sometimes approached through a porch. There is reason to believe that these cellas were always covered with true vaults, which survived in a few near the northern end of groups I and II. Elsewhere the lower courses of their brickwork could be traced. Another and larger type, best illustrated by ruin xiii (Plate 53), has a cella with a vaulted narrow chamber behind the wall facing the entrance. Low vaulted openings adjoining the side walls give access to this chamber or passage, thus permitting circumambulation of the principal image, which once must have

occupied the cella wall facing the entrance. This passage at the back was vaulted, and might be decorated with frescoes or relievo statuary. The same disposition of the ground-plan prevails also in the cave-temples of the site.[6]

Cellas with enclosing passages.

A third type, represented mainly among the larger shrines, corresponds closely to the one which is most common among the Buddhist sanctuaries of the Khotan sites (Dandān-oilik, Khādalik, etc.). Here we find a cella, usually square, approached through an antechapel and enclosed on the remaining three sides by a passage which communicates with the latter and served for the 'Pradakṣiṇā'. In the larger shrines of this type, e. g. x–xii, xxv, xxvi (Plates 52, 53), the passage widens somewhat at the back of the cella and forms a chamber adorned with relievo statuary. Elsewhere the passages appear to have been decorated only with wall-paintings. The fourth and fifth types are confined to monuments for which a funerary character may be assumed with the greatest probability.

Sepulchral monuments.

The fourth type in its external appearance presents itself as a Stūpa, with a cylindrical dome rising either direct from a low platform or from a base of varying shape which may be circular, polygonal, or square. Usually there is a square walled enclosure. The sketch-plans in Plates 52, 53 and Figs. 287, 288 will help to illustrate this type. The peculiarity of these 'Stūpas' is that their interior is invariably hollow, and that those in fair preservation still have an entrance by which the vaulted interior could be reached. In none of the vaulted circular chambers examined or cleared did I find either cult objects or human remains. And yet it is certain, both from their association with the monuments of the fifth type and from the exact analogy of the 'Stūpas' found at the cemetery of 'Kosh-gumbaz', outside the ruined town of Kara-khōja, which Professor Grünwedel has examined and described in some detail,[7] that they served a sepulchral purpose. This was definitely proved by finds of cinerary urns and boxes at the foot of the pillar-like structures (Figs. 280, 288) which belong to the fifth type. Whether square or polygonal in shape, they have each a small walled enclosure, and taper in their superstructure. Their appearance is curiously reminiscent of Roman funeral monuments.[8]

Atmospheric conditions affecting ruins.

Before I proceed to describe the results of the excavations carried on at different ruins I may conveniently record certain observations concerning the conditions in which I found them and which affect all remains of the site. At the first glance it was easy to notice that all the exposed portions of the ruins had suffered much from the destructive effects of rain and snow. I have already had occasion to refer to the climatic conditions of the Kara-shahr valley as being distinctly less arid than those prevailing in the central portions of the Tārīm Basin or in its much reduced counterpart, the Turfān depression. Of the heavy rain-storms reported to visit the valley on not infrequent occasions during the summer[9] there was clear archaeological evidence in the almost complete effacement of the relievo decoration in plaster which the outside walls of some of the funeral structures appear to have borne at one time. The plain plaster coating of temple walls, etc., has similarly been washed down almost everywhere.

Mists rising from Baghrash lake.

The position of the ruins on sandstone terraces, which, though low, are well above the level affected by the subsoil moisture of the surrounding plain, had fortunately saved them from the disintegrating effects of *shōr*, so strikingly illustrated by the remains of other Kara-shahr sites. Yet, situated as they are within six miles of Baghdād-shahri and even less of the nearest shore of Lake Baghrash, the ruins could not escape the slow but constant deletory action of the atmospheric

[6] See Grünwedel, *Altbuddh. Kultstätten*, pp. 195 sqq.; Figs. 449, 454, 458.

[7] Cf. Grünwedel, *Idikutschari*, pp. 110 sqq.; *Altbuddh. Kultstätten*, pp. 336 sqq.

[8] For similar structures at the 'Kosh-gumbaz' of Kara-khōja, cf. Grünwedel, *Idikutschari*, Figs. 105, 108. In these Professor Grünwedel is prepared to recognize distant imitations of Roman funeral monuments; cf. *Altbuddh. Kultstätten*, p. 336.

[9] Cf. Grünwedel, *Altbuddh. Kultstätten*, pp. 192, 206.

conditions produced by the vicinity of this great sheet of water and marsh-land. From these we suffered a good deal, though December belongs to the driest portion of the Turkestān year. During the greatest part of our stay at the site an icy mist, rising from the lake on the south, enveloped ruins and camp; together with minimum temperatures down to 42 degrees Fahrenheit below freezing-point it made work very trying. The nightly hoar-frost practically amounted to a light snowfall. It continued to cover the ground even when the sun fitfully struggled through. There was constant difficulty about getting adequate light for photographs, and it was only during the last day or two that the atmosphere cleared sufficiently to allow most of them to be taken. In them, too, the hoar-frost is conspicuous.

Temples destroyed by fire.

The excavations had not proceeded far before it became quite clear that in most of the shrines the damage caused by fire was even greater than that due to moisture. That the whole site had been subjected to a big conflagration is certain. The effects of this were most striking in the larger temples, where evidently the amount of timber inserted in the walls, etc., and of other inflammable materials had been great. Here the burning had hardened all the masses of fallen brickwork, making excavation slow and difficult. But fortunately it had at the same time reduced much of the smaller relievos in friable stucco to the condition of hard, if somewhat brittle, terra-cottas. Thus incendiary fury had helped to preserve them where the bigger sculptures were either completely smashed or else had decayed through damp beyond all hope of removal. But even in the small cellas, where there was little to feed the fire and where consequently the sun-dried brickwork had remained unaffected by the heat, evidence of wilful destruction was obvious.

Muhammadan iconoclasm.

None of the numerous Chinese coins, found mostly in places where they must have been deposited as votive gifts at image bases, etc., are of issues later than the end of the eighth century.[10] On the other hand, finds of Uigur manuscript remains and *sgraffiti* indicate that the shrines still continued to be visited as places of worship at least during the earlier period of Uigur dominion (ninth–tenth century). Thus the idea suggests itself that this wholesale burning may have been caused by iconoclastic zeal during one of the early Muhammadan invasions following the conversion of the Karluk Turks in the second half of the tenth century. The fact that the temple ruins of the Khōra site, higher up in the valley of the Khaidu-gol, which will be described further on, have also been destroyed by fire seems to support this conclusion.

Shrine xxv of westernmost group.

In describing the different ruins and the finds made among those which were excavated I propose to follow their topographical order, beginning at each group from the south-west. The shrine (xxv in Plate 52) at the southern end of group I, which extends along the westernmost of the previously mentioned three ridges, proved to have suffered badly from moisture. Its cella measures about 20 feet square, and has in front a large antechapel occupying the top of a terrace that is walled up against the slope of the ridge and approached over a flight of stairs. This and part of the antechapel showed signs of some previous clearing by Professor Grünwedel's party. Débris lying to a height of 7 feet and more filled the cella and the enclosing passage. Excavations were carried down to the floor in the northern passage and in part of the cella. In the latter they brought to light remains of over a dozen small painted panels, all unfortunately badly perished through damp. There were pieces, too, of a small wooden arch, Mi. xxv. 001–2 (Plate CXXVIII), decorated with relievo figures of Buddhas. Other miscellaneous minor objects are described in the List below.

[10] As seen from Appendix *B*, out of thirty-three coins from the site, thirty-one were discovered, as it were *in situ*, within shrines. Only five of them belong to pre-T'ang issues (with the legends *Wu-chu* or *Huo-ch'üan*); eight show the legend *K'ai-yüan*, current throughout the T'ang coinage; six are of the Ta-li period (A.D. 766–79), and not less than fourteen bear the *nien-hao* Chien-chung (A.D. 780–3). It is worth noting that the last *nien-hao* is the latest found on T'ang coins from Khotan sites as described in the list of *Ancient Khotan*, i. pp. 575 sqq.

Finds in cellas v, v. a.

Better results rewarded the clearing, here complete, of two small cellas that lay next on the north. In v there were found numerous pieces of painted wood-carving, most of which appear to have served for the decoration of the walls. Among them may be mentioned the part of a miniature carved wooden arch, Mi. v. 003 (Plate CXXVIII), formed of two dragon-like beasts supporting a flaming jewel in the centre; the wooden plank, Mi. v. 008, showing an all-over pattern of lattice-work painted in silver on dark red ground; the head of an elephant, vigorously carved in wood, Mi. v. 009; and about a dozen square blocks of wood hollowed out into a rough representation of a lotus flower, of which Mi. v. 006, 0010 are specimens. In the adjoining small cella, v. a, about 9 feet square, there survived on either side portions of four seated Bodhisattvas in relievo, showing elaborate ornaments over their breasts and arms and, in spite of the softness of the stucco, retaining a good deal of the bright colouring of the robes. A large seated Buddha figure, which appears to have occupied a central pedestal, was almost completely destroyed.

Clearing of cellas vi, vii.

Nothing was found in the four apartments continuing the line to the north-west. But in front of the last cella the side walls of a large outer room, vi, partly destroyed through erosion of the slope over which it was built, still retained each the lotus base of a large statue. Of these statues only the upper part of a colossal arm was found, decorated with a monster's head resembling that seen in Mi. xviii. 003 (Plate CXXXVIII), and evidently representing the shoulder-piece of armour such as appears on some of the Lokapālas in the Ch'ien-fo-tung banners. The stucco fragment was too badly decayed for removal, but looked as if the bases once were occupied by Lokapālas. A low shapeless mound adjoining to the north-west proved to mark the position of a small cella, vii, with anteroom, almost completely destroyed down to the foundations of the wall, but retaining under its débris a number of interesting relics. First there emerged, from below layers of loose earth and charred wood, a narrow panel of wood richly painted in floral designs along its bevelled edge and bearing above this five detached lines in large Central-Asian Brāhmī script and Kuchean language. It may have formed part of the frame for a picture painted on plaster over string matting, of which several fragments, none any longer recognizable in design, turned up close by (for a specimen see Mi. vii. 0024).

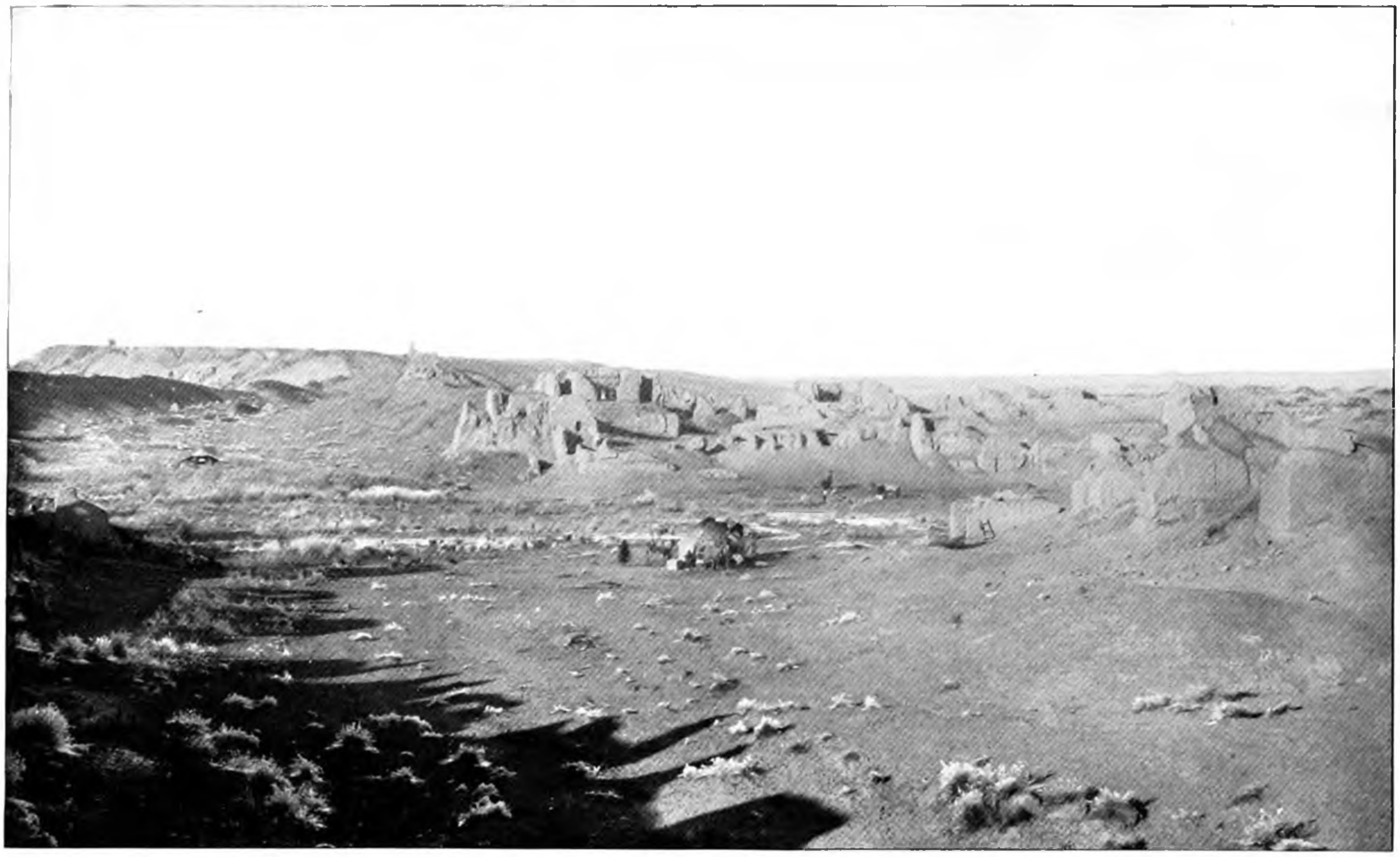
Painted panels in Gandhāra style.

Close by, at the foot of an image base occupying a small niche, was found the fine painted panel Mi. vii. 0019 (Plate CXXIV), broken into three pieces but complete. It shows a well-painted Bodhisattva seated in European fashion upon a throne under a flattened horseshoe arch. All details of the figure and drapery are drawn in the style of Gandhāra. The columns supporting the arch are decorated in a fashion that recalls late classical motifs. Two other painted panels, Mi. vii. 0016, 0018, 0017, each with the figure of a standing Buddha, were discovered in the same spot; they are of equally good workmanship, but have suffered by abrasion and in parts by fire. The three panels have a uniform height, and, as the return edge at each side of Mi. vii. 0019 proves other panels to have once adjoined at right angles, it is probable that all three originally belonged to one piece. The wood left bare on the top and bottom of Mi. vii. 0019 suggests a covering framework which might perhaps have joined the whole into a base capable of supporting a small relievo image. There were found also numerous fragments from stucco relievos (Mi. vii. 001–14, 0020–3), some apparently from larger images and the rest likely to have belonged to relievo friezes on the walls of the type to be described further on. What little remained of a thin dividing wall at the back of cella vii showed traces of frescoes with small worshipping figures.

Relievos of carved panel.

The adjoining cella, viii, only yielded several pieces of wood, jointed but without decoration, which may have belonged to the base of some statue. The next three cellas were cleared without any finds, but an interesting relic came to light in the small shrine ix. Within its walls, still standing to a fair height but washed completely bare by rain, hard clay filled the interior to a height of over

A



285. RUINED SHRINES IN NORTH-WEST PORTION OF 'MING-OI' SITE, SHŌRCHUK, WITH END OF GROUP II, SEEN FROM SOUTH.
Ancient watch-tower above cave temples marked by A.

286. MAIN GROUP OF CAVE TEMPLES, WITH 'MING-OI' SITE, SHŌRCHUK, IN DISTANCE, SEEN FROM WEST.

xx xvii

287. RUINED STŪPA AND SHRINES AT NORTH END OF 'MING-OI' SITE, SHŌRCHUK, SEEN FROM NORTH-WEST.

xxvi xxii

288. GROUP OF FUNERAL MONUMENTS AT SOUTH-EAST END OF 'MING-OI' SITE, SHŌRCHUK, SEEN FROM SOUTH.

3 feet. Embedded in this there was found in excellent preservation the fine wooden panel Mi. ix. ·001 (Plate CXXVII), with groups of relievo figures delicately carved in pure Gandhāra style. The panel, close on 11 inches high, is semicircular at the back, and was evidently fixed to a wall or other background by nails, of which one in bronze still adheres. The flat upper portion of the front shows two scenes, obviously from the Buddha legend, one above the other. A projecting portion at the bottom is divided into two niches, the one on the right holding two kneeling worshippers, perhaps meant for donors, the other the figure of a standing Buddha with staff. The interpretation of the two scenes above, in both of which the haloed Buddha appears nude except for a loin-cloth, is uncertain. But in the lower scene the pose of one of the worshippers, prostrated below the Buddha's feet with the crown of the head touching the ground, suggests the Dīpaṅkara-jātaka, so frequently represented in Gandhāra relievos.[11] The modelling of the figures and the execution of the whole follow the style of Gandhāra sculpture so closely that direct import of the little relic from the Indus region would suggest itself, were it not for the head-dress of the two worshippers below, which looks Central-Asian, and for the fact that the great mass of stucco relievo fragments found at other ruined shrines of the site shows the impress of Graeco-Buddhist art quite as strongly. In the same cella was found also the well-carved wooden bracket Mi. ix. 002 (Plate CXXVIII).

Remaining cellas of group I.

The remaining cellas of group I were cleared without any finds of interest being made. In the shrine ix. a, however, which is somewhat larger and belongs to the first type, partial clearing showed, in the passage by the side of a central image base, remains of relievo figures badly decayed through damp.[12]

Cellas i, ii of group II.

In group II, occupying the middle ridge, finds were made mainly among the small cellas to the south, the walls of which were badly decayed and evidently had fallen early. From a narrow passage, i, adjoining a small cella at the southern end of the row that has been completely destroyed there were recovered numerous fragments, Mi. i. 004. a-h (Plate CXXXVII), of a valance in richly painted stucco which must have adorned the border of a projecting corner. The design, with its floral band on the top and the rows of triangular hanging 'swags' and tassels below, looks distinctly like an elaboration of the pattern found painted valance-fashion on the walls of the central hall in N. III of the Niya Site.[13] Among the fragments of small stucco relievos, which probably occupied projecting friezes on the passage wall, the well-modelled face of a Buddha, Mi. i. 001 (Plate CXXXII), may be specially mentioned. Before a small niche in i, retaining part of a lotus base in plaster, there were found embedded in the flooring four T'ang coins, just as they had been deposited as a votive offering. Two bear the legend *K'ai-yüan*, two the *nien-hao* Ta-li (A. D. 766–79); all are in excellent preservation, showing practically no wear. On the north side of the passage i was another small and badly destroyed cella, ii. This yielded a number of small relievo fragments, some from statues of, or over, life-size (see e.g. Mi. ii. 007, Plate CXXXIX), and two well-carved hands from wooden statuettes, Mi. ii. 001, 009.

Wood-carvings, decorated tiles.

Beyond this again there was found a narrow passage, xxiii, enclosing what appears to have been the base of a small Stūpa, now completely destroyed. Here the débris had helped to preserve a considerable number of interesting wood-carvings, such as the ornamented brackets Mi. xxiii. 008–11 (Plate CXXVIII), including two with grotesque dragon heads; panels with fine floral decoration like Mi. xxiii. 0015 (Plate CXXVIII); the upright Mi. xxiii. 0012 (*ibid.*), reminiscent of Lou-lan designs. The staffs with elaborate lathe-turned heads, Mi. xxiii. 0013, 0019–22, may have formed part of a balustrade round the Stūpa. The fine architectural tile, Mi. xxiii. 1 (Plate CXXIX), shows

[11] Cf. Foucher, *L'art du Gandhâra*, i. pp. 273 sqq.

[12] This shrine appears to be the same as the one numbered 3 by Professor Grünwedel, *Altbuddh. Kultstätten*, p. 192, and mentioned among those where tentative diggings were effected without special results.

[13] See *Ancient Khotan*, i. p. 333; ii. Pl. VII.

a well-modelled Bodhisattva head in high relief treated in almost pure Gandhāra style and set within a decorative square frame. Its material is a fine evenly-fired clay. Fragments from the same or a similar mould were found in numbers at other ruins also. The fragment of a pottery vessel, Mi. xxiii. 0026, is of interest, as it bears a short Tibetan inscription incised before burning.

Mould for casting stucco relievos.

From two small detached cellas further north, xxiv, xxvii, six fragmentary Pōthī leaves in Brāhmī script were recovered, besides the fine relievo plaque Mi. xxiv. 001 (Plate CXXXVII) and the badly injured fragment of a painted wooden panel. Beyond these cellas again stretches a series of shrines which retain their walls to a fair height, but have suffered badly from moisture in their interior. The only noteworthy find made here was that of a plaster of Paris mould, Mi. iv. 001 (Plate CXXXVII), which has forms for casting a small seated Buddha and curls and zigzag locks of hair for larger relievo figures. The find was of special interest to me at the time as definitely proving the use of moulds for the production of those stucco relievos which came to light in such abundance and variety from other ruined shrines of this site. Since then information has become available about the important discovery of some thirty such moulds which was made by Professor Grünwedel's party in two cellas of group II.[14] Finds of exactly corresponding moulds that I made at Khādalik have been recorded above.[15]

Group III, shrine xxvi.

Among the shrines cleared in group III, along the easternmost ridge, no finds were made except in the cella xxi, where an octagonal post with a line in Brāhmī on each side came to light, and in the large temple xxvi. It rises as an imposing pile on a high walled-up terrace, seen in Fig. 288 on the left. The top of this terrace measures approximately 80 feet by 68; it must have been once approached by stairs leading up the north-east face, but these are completely covered by heavy masses of débris and could not be cleared within the available time. The cella, $22\frac{1}{2}$ feet square, is enclosed by walls 3 feet thick, now reddened and hardened by fire. The interior was filled to a height of more than 8 feet by similar hard débris. Passages, about 6 feet wide and each lit by a window, led on the north-west and south-east sides to the chamber at the back, about 11 feet wide. The approach to the cella leads through an antechapel or front hall of unusually large dimensions, about 37 feet deep, and this is flanked on either side by a small subsidiary chapel, about 8 feet square, another unusual feature.

Fragments of stucco relievos.

The clearing of the front hall was rewarded only by a few small fragments of stucco relievos, including the two small heads Mi. xxvi. 001, 004. The hard-burned débris of the cella was partially cleared, but yielded only a few small relievo pieces like Mi. xxvi. 002, 0010, still recognizable. Here, too, the outer passage walls had escaped the worst effects of the conflagration, and it was along the north-west wall and in the west corner that the remaining stucco relief fragments, including the decorative bands Mi. xxvi. 008–9 (Plate CXXXVII) with appliqué flowers, were found. They must have fallen early from stucco friezes fixed to the outer wall, as will be described presently in shrine x–xii. In some places this wall still retained the wooden pegs which helped to carry these friezes. At the south-east foot of the terrace supporting xxvi there was found a cinerary urn of rough pottery containing completely decayed human bones.

Sepulchral monuments.

To the east and south-east of group III of shrines the lower ground is occupied by the sepulchral monuments of the two types above described. All of them appear to have been enclosed by rectangular walls of no great height. Those of the 'Stūpa' type in their domed portion show a curious resemblance to the felt tents, or 'Ak-ois', of Kirghiz and Mongols. In none of these monuments were there signs of burning, but there is reason to assume that their interiors, easily accessible as they were, had been searched again and again for 'treasure'. The one nearest to xxvi and best preserved (Fig. 288), with a domed chamber about 13 feet in diameter, was cleared

[14] Cf. Grünwedel, *Altbuddh. Kultstätten*, p. 192.

[15] See above, pp. 158, 187.

without any finds. The ruin xxii, seen in Fig. 280, had suffered least among the monuments representing the fifth type. With its top ornamented in open brickwork it still rose to a height of about 18 feet. A small square chamber within showed a double floor with an interval of about $1\frac{1}{2}$ feet. Its contents had evidently been rifled long ago. Within the enclosure surrounding the base, and placed against the latter, were found five cinerary jars, about a foot high, as seen in Fig. 280, and of fairly coarse pottery, some black, some red. They were filled with ashes and fragments of charred bones. There were unearthed besides two small wooden boxes of rough make, measuring 15″ × 4″ × 4″, also containing small pieces of bones, wrapped in remains of a thin gauze-like cloth. No trace of any writing could be found either on boxes or on jars.

Cinerary jars and boxes.

Section III.—RELIEVOS AND FRESCOES FROM NORTH-WEST PORTION OF 'MING-OI' SITE

I now proceed to the description of the ruined shrines in the north-west portion of the site, where excavations proved far more fruitful. The top of the central terrace is there occupied by a group of large temples which face towards the transverse depression of the site and overlook a series of smaller shrines built on, and in part into, the slope to the south (see Figs. 281, 282; Plate 53). The westernmost of the central temples, which is seen in Fig. 291 from the front, after clearing, and in Fig. 284 from its back, is built partly upon a high walled-up terrace. Its walls, 4 feet thick round the cella and over 5 feet thick outside, still rise to over 16 feet, and must have been once far higher to account for the heavy masses of débris which filled the interior to a height of nowhere less than 6 feet and in places much greater. The temple comprised a cella $20\frac{1}{2}$ feet square, enclosed by passages close on 6 feet wide at the sides and widening to 10 feet at the back. Access to the cella lay through a hall which may have been open in front, fully 40 feet long and of a depth no longer determinable.

Westernmost of central temples.

It was during the clearing of this hall, x, that numerous finds of relievo fragments from small figures in stucco first furnished an indication of the far richer harvest of sculptured remains awaiting recovery within the cella and the chamber behind. They do not differ in type from the latter, and will therefore be better discussed together further on. Here, however, may be noted the discovery of fourteen Chinese copper coins which were found in the débris at heights varying from 1 to 4 feet above the floor. Ten among them were T'ang issues, and the rest much-worn *Wu-chu* pieces. From the position in which they were found it may be concluded with much probability that they were originally deposited on the projecting ledges, which here, as in the other parts of this temple, carried relievo friezes. Close to the cella entrance were found four fragments of glass, Mi. x–xi. 001–4 (Plate IV). They are of interest because they manifestly come from a bead-maker's workshop, and thus clearly prove the existence of glass-making as a local industry.

Stucco relievos found in Mi. x.

The cella xi proved a rich mine of stucco relievo remains of greatly varying types and sizes. They turned up here almost all in a burned condition, and obviously owed their preservation to the hardening consequent on a conflagration. On the other hand, as a result of this process, only a few out of hundreds retain traces of their original polychrome painting. The total absence of remains of large statues or of image bases makes it clear that the decoration of the temple must have consisted mainly of relievo friezes covering its walls. Their position was still marked by three rows of square holes in which the wooden supports of the friezes had once been fixed (Fig. 291). The holes were about 3 inches square and set at intervals of less than 2 feet from each other. The distance between the rows of holes was about 5 feet, and the lowest *circ.* 2 feet above the ground. While the relievo friezes must have extended along the whole length of the cella walls, the distribution of their remains was curiously unequal.

Stucco relievos from cella Mi. xi.

Position of relievo friezes.

Effect of conflagration.

By far the greatest number of stucco fragments was found along the east wall, and especially in the south-east corner; the smallest came from the west side.[1] The most likely explanation appears to me to be that, the fire having started from the west, the friezes on that side fell and were crushed before the larger stucco pieces had been hardened. The relievos on the east wall were longer exposed to great heat and had thus time to get 'fired' before the wooden shelves, etc., supporting them were consumed and brought down all their weight of sculpture. This supposition is supported by the fact that in two of the holes on the east wall the wooden stumps of the supports still survived. For the same reason it is also probable that the great majority of the relievo fragments belonged to the upper friezes. The three coins found within the cella belong to T'ang issues.

Sculptures in chamber behind, xii.

Here, as in other shrines previously noticed, the passage enclosing the cella appears to have escaped destruction by fire, but showed plainly the effects of long exposure to moisture. The passages on the east and west sides do not appear to have contained any relievo decoration, and as the plastering of the walls had completely perished, no trace was found of the frescoes with which they are likely to have been once adorned. All the more gratifying is the survival of remains from the sculptural decoration in the chamber, xii, behind. Here careful excavation brought to light groups of richly draped statues, in high relief and nearly life-size, occupying low platforms along the outer walls in the north-west and north-east corners (Figs. 294, 295), as well as a considerable number of interesting small relievos. These had fallen from a stuccoed frieze extending along the outer north wall at a height of about 9 feet from the ground. All the stucco sculpture was found in a very friable state owing to damp, and the removal of any of the statues was quite impracticable. Even the heads, of which three or four were recovered from the débris below, where they must have all fallen early, were in too soft a state to permit of safe transport. The same was the case also with two figurines, only 6 inches high, which were found at the feet of one of the images in the north-east group and evidently represented worshippers, perhaps the donors.

Stucco images in passage corners.

Each side of the groups in the two corners appeared to have comprised five to six standing figures closely packed; but the outermost statues had badly decayed, and the places of some were marked only by the remains of the wooden frames and reed bundles over which their plaster had been modelled. Judging from the drapery and pose, most of these statues appear to have been intended to represent Buddhas. The character of others, as seen on the extreme left in Figs. 294, 295, remained to me doubtful. The style in all the statues is unmistakably derived from Graeco-Buddhist models, and a comparison of the photographs with those of the colossal statues excavated in 1901 at the Rawak Vihāra will show how closely most details of treatment and execution agree.[2] A very curious feature, and one for which the limitations of my iconographic knowledge did not allow me to find an acceptable explanation, was the appearance in the angle of the north-east corner of remains of a prostrate draped figure, raising its head and breast. The placing of the west and east portions of these sculptured groups in recesses of the outer side walls was obviously dictated by considerations of space for circumambulation. In the same way the position of the whole statuary in the corners may be accounted for by the fact that only there sufficient light could be secured for them from the side passages.

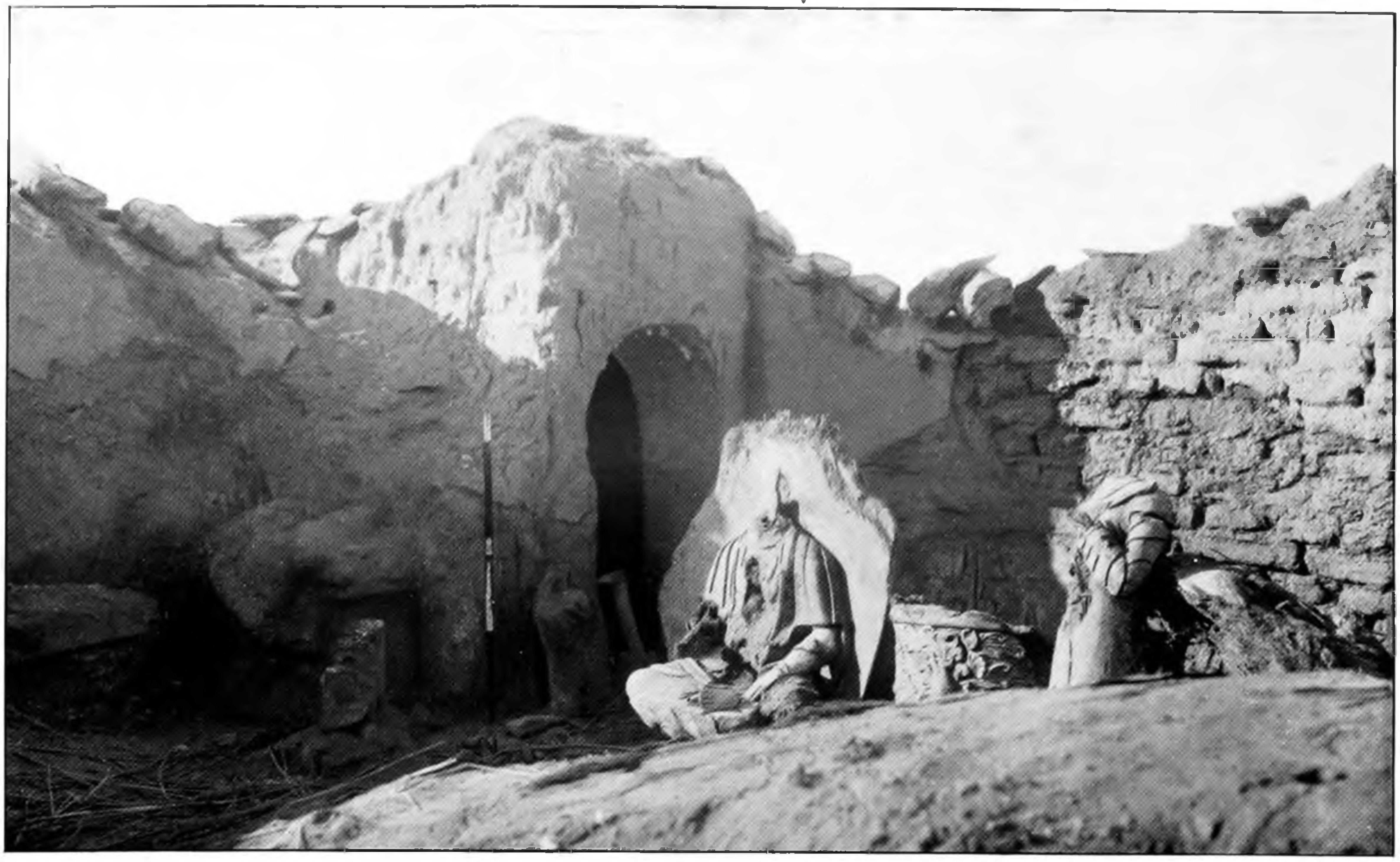
Small relievos from stuccoed frieze.

The preservation of the stuccoed cornice once carrying the frieze of small relievos along the north wall was a discovery of particular interest; for it showed plainly how these relievo friezes are likely to have been fixed in the cella xi and elsewhere at this site. The cornice, of which the lowest

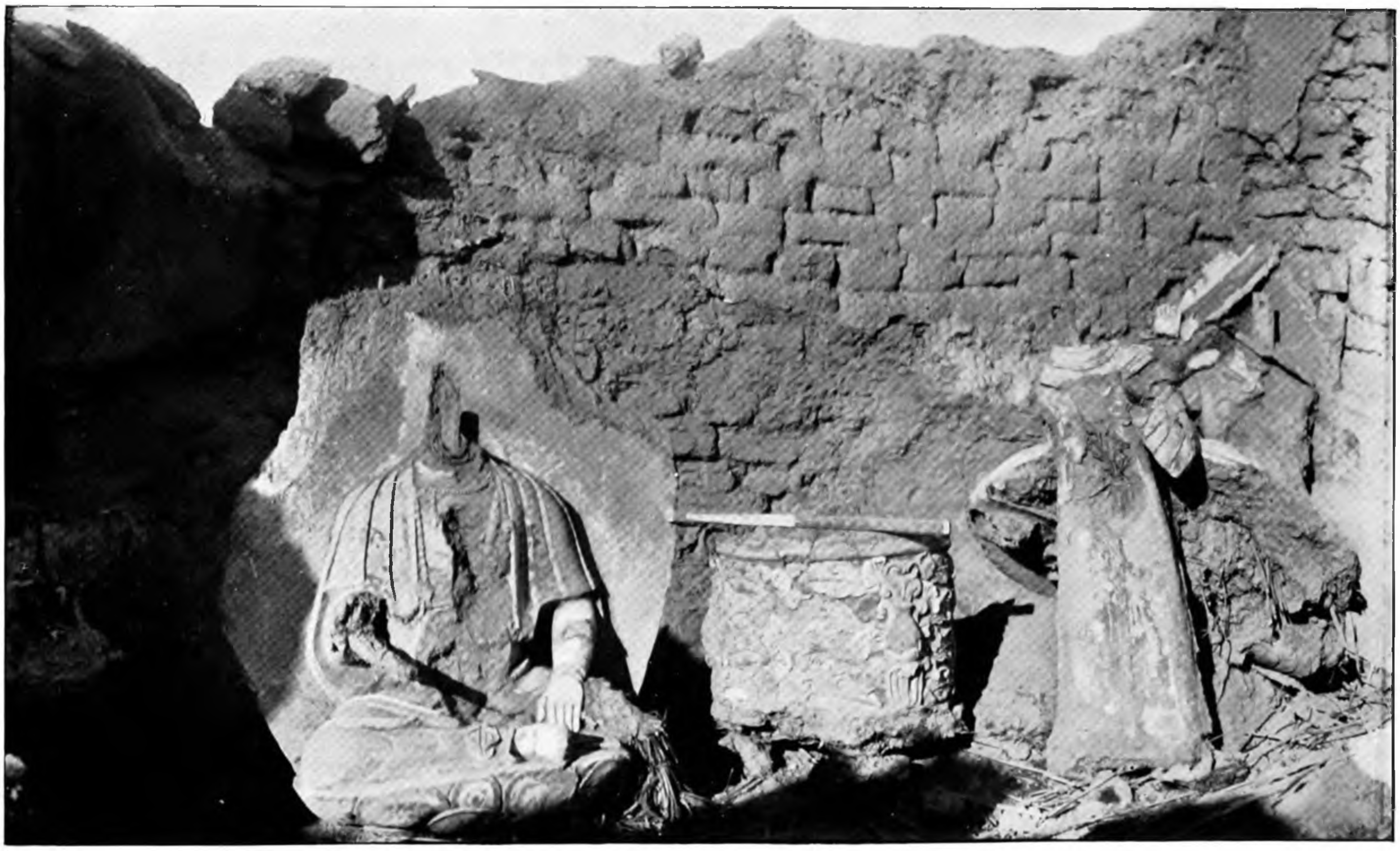
[1] The temple not being orientated, the terms east, west, etc., are used only for brevity's sake and as approximate.

[2] See *Ancient Khotan*, i. Figs. 61–8; ii. Pl. XIV–XVII.

Fresco Mi. xvii. 0014



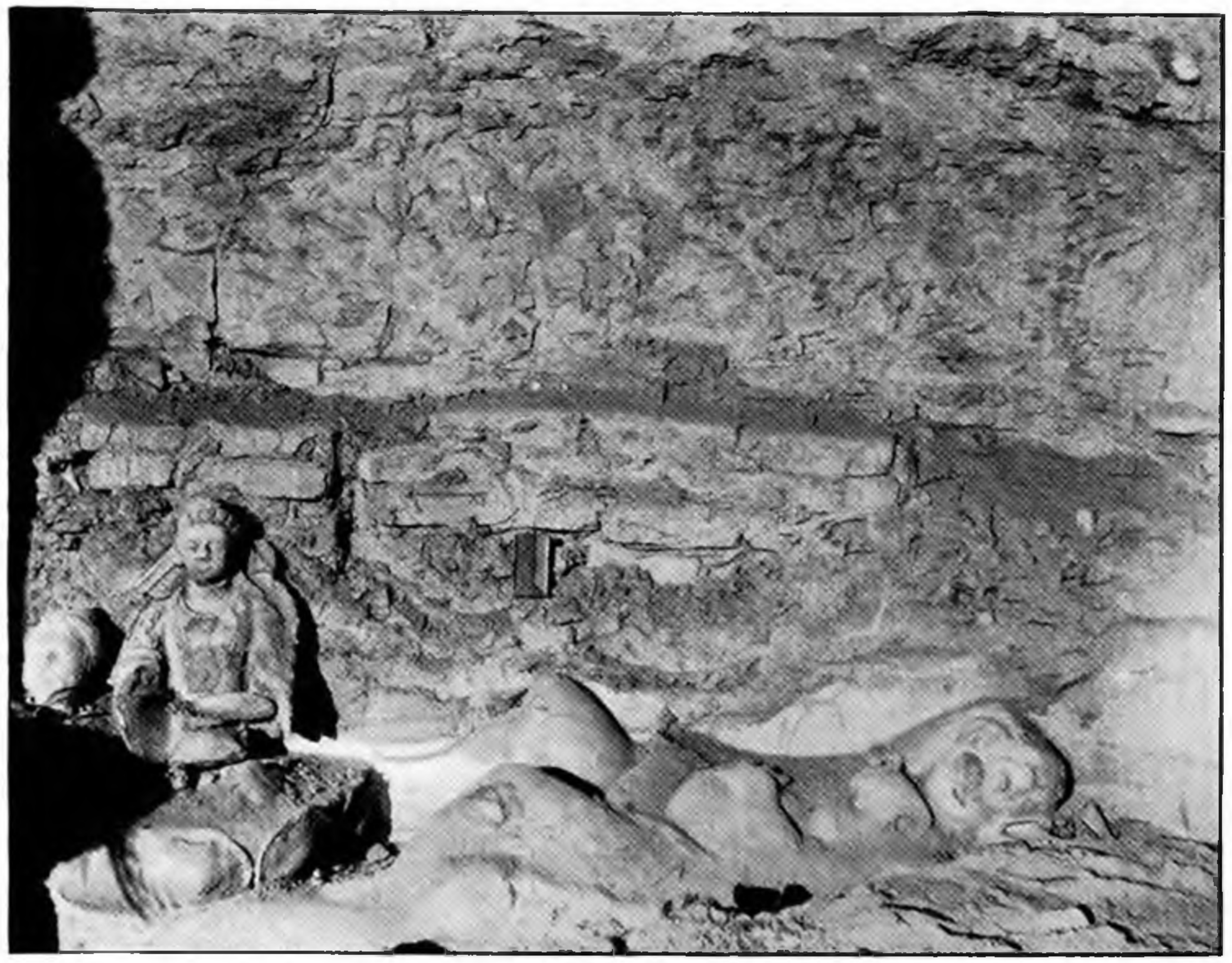
289. NORTH CORNER OF ANTECHAPEL AND ADJOINING END OF CELLA IN RUINED SHRINE Mi. xviii, 'MING-OI' SITE, SHŌRCHUK.



290. STUCCO RELIEVO STATUES AND CIRCULAR IMAGE BASE FOUND OUTSIDE CELLA OF RUINED SHRINE Mi. xviii, 'MING-OI' SITE, SHŌRCHUK.

291. TEMPLE RUIN Mi. X-XII IN NORTH-WEST PORTION OF 'MING-OI' SITE, SHŌRCHUK, SEEN FROM SOUTH-EAST.

292. RUINED STŪPA AT SU-BĀSHI SITE, NORTH OF KUCHĀ TOWN.



293. STUCCO RELIEFS FOUND EXPOSED AT ENTRANCE TO CAVE TEMPLE A, NORTH-WEST OF 'MING-OI' SITE, SHŌRCHUK.

294. STUCCO RELIEVO SCULPTURES IN NORTH-EAST CORNER OF PASSAGE Mi. xii OF RUINED TEMPLE, 'MING-OI' SITE, SHŌRCHUK.

portion is visible in Fig. 295, projected about 6 inches, and was moulded of stucco put over a framework of wood and reed wattle. Its height was about 2 feet. It had several rows of holes left by the wooden pegs which once fastened the individual small relievos of the frieze to the cornice. The evidence thus gained as to the technicalities of the frieze does not help us to reconstruct the relievo decoration as a whole from the *disjecta membra* recovered. But the number of interesting and relatively well-preserved pieces among them is great enough to justify a separate notice here. The value of the small relievos from xii is much increased by the preservation in most cases of their original bright colouring.

Warrior figures of frieze.

It is impossible to guess what scene or scenes, sacred or quasi-profane, the frieze as a whole may have represented. But certainly the proportion of pieces belonging to warrior figures is striking. Plate CXXXV shows one of these almost completely reconstructed from detached pieces (Mi. xii. 008, 0010, 0015, 0017). We see there the warrior's head and body protected by scale armour of a type closely resembling that actually illustrated by the lacquered leather scales excavated in the Tibetan fort of Mīrān.[3] A particularly interesting feature of the armour is the shield, which is represented in several varieties. One, evidently meant for leather, is round and fitted with five bosses (Mi. xii. 0018, Plate CXXXV). Another, plainly intended as of metal, has its centre occupied by an elaborate Gorgoneion relief (Mi. xii. 0020, Plate CXXXV). That this goes back to a classical prototype is quite certain. What adds to the interest of this shield is that it definitely proves the corresponding grotesque head, which is found so frequently as an appliqué ornament on terra-cotta vases from Yōtkan and other Khotan sites, to be directly derived from the model of the classical Gorgon's head.[4]

Shield with Gorgoneion.

Methods of production from moulds.

Of other human figures may be mentioned a Bodhisattva, Mi. xii. 001 (Plate CXXXIV), modelled in pure Gandhāra style, and a cross-legged male excellently posed, Mi. xii. 007* (Plate CXXXV). The head Mi. xii. 006 (Plate CXXXII) has an interest of its own because it well illustrates both the method by which all this stucco statuary was produced from moulds and the clever way in which this method could be used for introducing variations. The face is undoubtedly produced from a mould which served for one type of head in the warrior figures; it still retains the bar of the helmet passing down the forehead. But instead of the helmet the head bears a mass of hair brushed up straight in an almost grotesque fashion. A very clever piece of modelling is the head Mi. xii. 005 (Plate CXXXII), which combines a grotesque weeping face of an unmistakably 'Mongolian' type with an elaborate Indian head-dress familiar from Gandhāra statues. The naturalistic skill with which animal figures could be handled by the artists who produced the moulds for this wealth of relievo decorations is attested by pieces like the excellently observed camel's head, Mi. xii. 0025, and the forelegs of a prancing horse, Mi. xii. 0023–4 (both in Plate CXXXVI). Fragments like Mi. xii. 0028, 0030, 0031 (Plate CXXXVII) show architectural details which are constantly met with in Gandhāra relievos and are there plainly recognizable as borrowed or developed from classical art. In the wooden finial of a small model Stūpa, Mi. xii. 0027 (Plate CXXVIII), we find reproduced with equal care all the details with which we are familiar in stone from miniature representations of Stūpas as they used to be built on the Indian North-West Frontier.

Naturalistic animal figures.

Date of relievos.

Were we to look at these relievo remains without any knowledge as to where they were found and as to the methods by which they were reproduced, we might well feel inclined to postulate for them an origin centuries nearer to the period that created their models in the Graeco-Buddhist sculpture of Gandhāra. So it is well to lay stress on the conclusive numismatic evidence

[3] See above, pp. 463 sqq. For an analysis of all details concerning the armour displayed by these mail-clad warrior figures of the 'Ming-oi' Site, cf. *Mi. xi. 00109 in List below. Their height, when complete, must have been 16 inches.

[4] See for specimens Pl. I; *Ancient Khotan*, ii. Pls. XLIII, XLIV.

Evidence of T'ang coins.

we possess as to the late date up to which the shrine adorned with these relievos was frequented. On the base bearing the statues of the north-east corner seven Chinese coins were found, tucked away behind the feet or otherwise placed securely. One among them bears, indeed, the legend *Huo-ch'üan*, used on the coinage of Wang Mang and ascribed to the regnal period A.D. 14–19. But we know that Chinese coin types were liable to be continued for centuries by recasting. On the other hand, three coins of the *Ta-li* (A.D. 766–79) and *Chien-chung* (A.D. 780–3) periods, besides one *K'ai-yüan* piece, make it certain that these particular images continued to be objects of pious worship down to the end of the eighth century, if not later. It would have been difficult to assume that sculpture made of mere friable plaster, i. e. mud, could have lasted for long centuries without repairs under climatic conditions such as those of Kara-shahr, and equally difficult also to believe that such a lapse of time had not brought about a considerable change in style. Fortunately we are saved all need of conjectural explanation of what might well have seemed an archaeological and artistic puzzle. The discovery of moulds such as those described by Professor Grünwedel and above shows clearly how the sculptural decoration of these shrines could be produced, repaired, or replaced without any appreciable change in style and workmanship for prolonged periods.

Chronological puzzle explained.

Types of relievos from cella Mi. xi.

The impression gained of the artistic skill of those whose work we see reproduced in the sculptural remains of xii is greatly strengthened by a review of the far more numerous, if less well-preserved, relievo fragments from the cella xi and the hall leading into it. Their variety is as great as their number. Yet obviously the recovered fragments represent but a very small proportion of the wealth of decorative sculpture which the triple frieze of this cella must once have displayed. Of the scenes represented it is impossible to form any definite notions, though prolonged study and comparison with pictorial remains found elsewhere might yet help an iconographic expert to trace the probable connexion between certain groups of relievo figures. That among these groups representations of the Bodhisattva type would be, as they are, particularly numerous was to be expected. They show considerable variety in scale and details, as seen in Plate CXXXIV. The general note on Mi. xi. 00 in the Descriptive List fully explains the way in which variations were produced by the application of separate moulds for limbs, head-dress, attributes, etc. The modelling of the head and body shows close adherence to the type fixed in Gandhāra sculpture. The same observations hold good also of the figures of youthful celestial attendants of which Plate CXXXIII illustrates specimens (Mi. xi. 0064, 0083), and of the small flying genii, probably meant for Gandharvas (see Mi. xi. 0069, 0085, Plate CXXXV); representations of them are frequent, though mostly badly broken. Very curious and uncertain in their interpretation are the emaciated male figures Mi. xi. 0096, 0097 (Plate CXXXIII), which but for the rich adornment might be taken for ascetics. Of interest, too, are the female figures with elaborate drapery of which Plates CXXXIII, CXXXV give specimens (Mi. xi. 3, 0051, 0072). In the first the vivid rendering of the laughing head deserves notice. The figures of mail-clad warriors found in the cella show but slight variations from those previously described.

Naturalistic treatment of heads.

The large number of heads found without corresponding bodies is obviously accounted for by their more rapid hardening under the effect of fire. The series of which specimens are reproduced in Plates CXXXII, CXXXIII is one of great artistic interest, and shows best the remarkable skill and freedom of naturalistic treatment which asserted itself in this school of sculpture where it was left untrammelled by hieratic convention. This is perceptible even in the fine bearded heads Mi. xi. 00102–4, where the models were obviously of classical origin transmitted through Gandhāra. The second head, though produced from the same mould as the first, shows the skill with which the sculptors of these stucco friezes, mere craftsmen as they were, could modify their productions; for a wholly changed expression of face is obtained here by the incision of heavy lines effected after

moulding. We can observe a still more interesting series of transformations in the heads shown in the second row of Plate CXXXII. The same mould was used for the face in all four. Yet by varying the appliqué parts used for hair, head-dress, beard, etc., as well as by deft changes effected after moulding or in setting, the heads are made to range from that of a naturalistically treated layman (Mi. xi. c056) to one resembling a classical satyr's (Mi. xi. 00107). The variety of expression commanded, in the treatment of the eyes in particular, is illustrated, e.g., by the intense look of Mi. xi. 0058 as compared with the natural placidity of the fine head Mi. xi. 0063.

Heads transformed after moulding.

Naturalistic feeling that strangely recalls Gothic art is displayed in the beautifully modelled head of a young woman, Mi. xi. 0099, wearing a wimple over her brushed back hair. This distinct tendency towards realistic treatment is most striking, perhaps, in those heads where emotion is expressed with a freedom that is very rare in Gandhāra sculpture. The cleverest among them is the grotesque head of a laughing old woman, Mi. x. 0019, with which may be compared also the laughing heads Mi. xi. 00100, 00125 (Plate CXXXIII). The head of a crying man, Mi. x. 0018, is also a good piece of work. Realism of the boldest type combined with imaginative force is displayed by the grotesque head Mi. xi. 0095 (Plate CXXXIII), half-human, half-bestial, shown in the act of vomiting a skull. The motif is clearly suggested by later Mahāyāna imagery such as is responsible also for the Bodhisattva-like figure, Mi. xi. 0098 (Plate CXXXIII), wearing a garland of skulls. The local artists' power of true observation of nature is attested by the fine relievos of horses, Mi. xi. 00138–9 (Plate CXXXVI), and does not forsake them either in the rendering of the head of the less familiar elephant (see Mi. xi. 00116–17, Plate CXXXVI). Finally we may note the distinctly Greek shape of the vase seen in Mi. xi. 00120 (Plate CXXXVII) and the appearance of acroteria and other classical details familiar from Graeco-Buddhist art in architectural fragments such as Mi. xi. 00126–7 (Plate CXXXVII).

Free expression of emotion.

Later Mahāyāna motifs.

Classical details.

Another shrine of the third type, to the south of the one just described and placed at right angles to it, did not invite excavation, as the deep débris filling it showed only too plainly the destruction which had been caused here by fire even in the side passages. A smaller detached structure to the east with badly decayed walls was cleared without any finds, and its purpose remained doubtful. Beyond it to the east lay a complex of halls and rooms, of which only the nearest, xiii, could clearly be recognized as a temple of the second type. Its cella measured 17 feet square and was filled with burned brickwork. The hall in front, which appeared to have been cleared previously, showed on either side of the cella entrance an image base about 2 feet high and 15 inches wide. Remains of completely calcined torsos from the statues once occupying them were just traceable.

Temple ruins to east.

The narrow chamber at the back of the cella, 4 feet 8 inches wide, proved on excavation to have retained a considerable portion of its fresco decoration along the foot of its outer walls. The preservation of the dado-like panels, still intact for a continuous length of 12 feet or so in the eastern half of the chamber (see inset plan in Plate 53), was due to this part having retained its vaulting, which helped to keep out moisture. Westwards the vaulting and much of the walls, too, had fallen, and the paintings at their foot had become effaced except for the narrow panel in the corner, marked 11 in the plan, and the fragmentary panel 12 at the foot of the west wall. This chamber at the back communicated with the cella by two somewhat lower vaulted passages, each about 4 feet wide and 4½ feet deep. They were found filled almost to the top with débris, including fragments of stucco sculptures which must have been thrust in from adjoining parts of the cella and of which Mi. xiii. 001–5 furnish specimens. From the fact that the outer wall of the western passage still retained a considerable portion of its fresco decoration (Mi. xiii. 10, Plate CXXIV) it may reasonably be concluded that the passages were blocked up by fallen débris before fire consumed the wrecked cella.

Fresco remains of vaulted chamber xiii.

Subjects of mural paintings.

The wall-paintings from the passage and chamber, all executed in tempera over clay plaster thickly mixed with straw, have been completely reproduced in Plates CXXV, CXXVI, and specimens of them in colour also in Plate CXXIV. A detailed description of them all will be found in the List below. Plate CXXV shows the continuous series, Mi. xiii. 5–9, recovered from the north wall of the chamber. It presents to us, in two scenes separated by a yellow band, Buddhist monks grouped before a teacher and a row of other monks retired within rock-caves in the forest and writing sacred texts. Taking into account the direction followed in the course of the Pradakṣiṇā, it is obvious that these scenes were intended to be viewed from left to right, and further that the scenes on the west wall (Mi. xiii. 11, 12) precede them, while those on the east wall (Mi. xiii. 1–4) follow them.[5] The paintings on the east wall (Plate CXXVI), which continue those of the north wall just mentioned, are divided into three scenes, each marked off from its neighbour by a yellow band. The scene on the left shows an aged monk holding pen and Pōthī leaf, with young monks kneeling before him and a celestial being, probably a Gandharvī, floating down from the sky and scattering flowers. In the middle scene we see another aged teacher faced by adoring disciples and with a Gandharvī descending from above. The right scene represents a Buddhist monk floating upwards on a cloud, while below five young monks and three haloed divinities kneel in adoration. Finally, in a recess spared from the east wall and facing north, we have a narrow panel (Mi. xiii. 1) that represents two Bodhisattvas kneeling one above the other. The panel Mi. xiii. 11, from the corresponding recess of the west wall, shows above a monk and below a Bodhisattva kneeling. The adjoining portion of the painting on the west wall was almost completely lost, and the same was the case with the one which must have occupied the north-west corner. But of the scene depicted in the middle a fragment survived, Mi. xiii. 12 (Plate CXXVI). This shows on the left a young monk doing *pūjā* to a seated teacher wearing a yellow robe. From above a monk is seen sweeping down carried by clouds, while in the foreground on the right there kneels a boy gaily dressed, probably the last of a row of worshippers, now lost, facing to the right.

Panels illustrate sacred story.

That the whole series of panels was meant to illustrate one and the same sacred story is highly probable ; but its identification must be left to a competent iconographic expert. The panels of the east wall suggest that the story ended with the translation of two aged 'Masters of the Law' to some Buddhist heaven as Arhats or Bodhisattvas. Perhaps it is they who are represented in the two divine figures of the last panel, Mi. xiii. 1. Rough as the work on the whole is, it is effective by its boldness, and that in spite of the limited range of the colours. Considering the very poor light of the chamber—I could find no trace of windows—the want of careful drawing and of general attention to details is perhaps scarcely surprising. Nevertheless a certain power of characterization is displayed, especially in the heads of the old monks. That these wall-paintings are much later than the period which produced the moulds for the relievo decoration previously discussed can scarcely be doubted. A more definite indication of the chronological limits may be left to those scholars who have had occasion to study the pictorial remains of Kuchā and Turfān in full detail.

Paintings probably of Uigur period.

Some reason for attributing them to the Uigur period may be found in the fresco fragment, Mi. xviii. 0014 (Plate CXXVI), the only other piece of wall-painting recovered by me at the site,[6] and also, perhaps, in a curious incidental feature. I mean the position in which pens and Pōthī leaves are held by the writing monks of the scenes on the north and west walls. As explained in the

[5] The numbers given to the different panels merely mark the order in which they were removed from the walls. These numbers, with the help of the inset plan of Pl. 53, show also the exact position originally occupied by the various panels. But they have no bearing upon the interpretation of the scenes, which must proceed from left to right and therefore in the reverse sense to the numerical order.

[6] See below, p. 1199.

descriptive notes on these frescoes, the pens are clearly held as if they were brushes, at right angles to the leaves, which, moreover, have their narrow end towards the writers, a position suited only for writing in vertical lines. Such writing must be either Chinese or Uigur here, and as there is nothing else pointing to the frescoes being the production of a Chinese hand, the latter interpretation seems more probable. But obviously the argument is not one to be relied upon with full certainty since we do not know what older prototype the painter-decorator may have followed.

Painting on west passage wall.

The painting from the outer wall of the west passage, Mi. xiii. 10 (Plate CXXIV), though evidently of the same period, is the work of a different and distinctly more skilful hand. It shows two rows of Buddhist devotees, evidently meant for monks, though their heads are not shaven and their garments vary in colours and ornamentation. Those in the upper row are represented as older by the indication of hair on their faces. The drawing of the outlines is very clean and firm, but there is no attempt at shading of the flesh such as is very noticeable in the figures of the chamber. Slight variations in the expression, tilt of head, etc., are introduced to break the monotony of the subject; yet the clumsy way in which the floral patterns are painted over the robes with total disregard of folds, etc., shows the perfunctory character of the work.

Wood-carvings from cella xiv.

Across an open court to the south of xiii is found a group of closely adjoining small cellas. In the northernmost, xiv, there were found several pieces of fine wood-carving. The once painted and gilded finial, Mi. xiv. 002 (Plate CXXVIII), may have formed part of a miniature shrine. The small but very carefully carved piece M. xiv. 003 (Plate CXXVIII), evidently from the side of a circular carved relic casket, shows a Buddha seated under an arcade. The Indo-Ionic column, the horse-shoe arch, the bust rising above the spandrel, and other details are purely Graeco-Buddhist in style and can all be exactly paralleled in stone from Gandhāra relievos. The work is undoubtedly of early date, and the excellent condition of the wood even now makes it easy to believe that the little casket had been a cherished object of worship for centuries before it met with destruction. In this cella there turned up also a fragmentary Pōthī leaf from a paper manuscript in Brāhmī script, apparently Sanskrit.

Stucco relievos from shrine xv.

The immediately adjacent cellas yielded no finds, but better results rewarded the clearing of a group of small structures which occupy lower terraces on the slope further south. From the shrine xv, a plain cella about 12 feet square, there came to light a considerable number of relievo fragments, closely allied in style to those found in x–xii and furnishing useful supplementary pieces.[7] The finest among these is the large head of a Bodhisattva, Mi. xv. 0010 (Plate CXXIX), which in graceful modelling and careful execution can bear comparison with the best of Gandhāra sculptures of this type. All of them had been hardened by fire and in consequence lost their colouring.

Carving with Buddhas.

Yet it was from the débris of this cella that two of the best pieces of wood-carving found at the site were recovered. One is the section of a carved wooden arch, Mi. xv. 0029 (Plate CXXVIII), in very good preservation and still richly gilded, showing a series of carefully carved seated Buddhas. It is highly probable that the piece, which has a tenon at one end and a mortice at the other, belonged to the border of a large vesica of a type represented by relievo fragments from Rawak and elsewhere.[8] More welcome even is the other wood-carving, the excellently modelled statuette, Mi. xv. 0031 (Plate CXXVII), close on 10 inches in height, representing a Lokapāla, in the best Chinese style of the T'ang period. Full of character and simple dignity, it is undoubtedly the work of a Chinese artist. In it we have tangible evidence of that reverse current of influence from

Statuette of Chinese Lokapāla.

[7] See e.g. Mi. xv. 005 (female torso, Pl. CXXXV); Mi. xv. 0013–17, Pl. CXXXIII; Mi. xv. 0019–20, Pl. CXXXVI.

[8] See e.g. *Ancient Khotan*, ii. D. i. 99, Pl. LV; R. ii. 2, Pl. LXXXIII; R. 08, Pl. LXXXVII.

the Far East which made itself felt with increasing strength in Central-Asian Buddhist art during the last centuries preceding its disappearance.

Tiles with Bodhisattva head.

In a small recess spared from the wall which divides xv from another cella to the south, and opening towards the platform of the hall xvi, there were found, thrown together in a heap, seventeen fragments of hard-burned tiles showing a Bodhisattva head in high relief in the centre and closely resembling in type and size the tile Mi. xxiii. 1 already described. Plate CXXIX gives specimens of heads from them (Mi. xvi. 004, 008). The fact that the walls of the recess, about 3 feet high, looked bright red as if of an oven suggested at first sight that it had been used as a kiln for firing such tiles, and that the fragments were left behind from malformed and rejected pieces; but, since there were marks of what might be subsequent accidental burning, other explanations also may be possible. To the west of xv there stretches a line of small shrines, partly built into the slope and hence of unusual shape. The partial clearing of their vaulted passages showed that the soil filling them was very damp and the fresco decoration of the walls almost completely perished.

Shrine xvii partially cleared.

To the north-east of the central group of temples there rises a conspicuous shrine, xvii, consisting of a rectangular cella and built on a high walled terrace, which Fig. 287 shows on the right as seen from the north-west. Its interior was found filled to a great height with hard-burned débris. The remains of stucco relievos brought to light by partial excavation at the entrance include the well-modelled heads, almost life-size, Mi. xvii. 003–5 (Plates CXXX, CXXXI). Like the rest of the relievos found here they show close correspondence in style to the work of Mi. x–xii. Of the bodies belonging to these heads no remains could be traced. Their plaster had evidently not been hardened sufficiently by fire before the walls fell in and completely smashed them. A *K'ai-yüan* coin was found close to the entrance.

Group of cellas xix, xx.

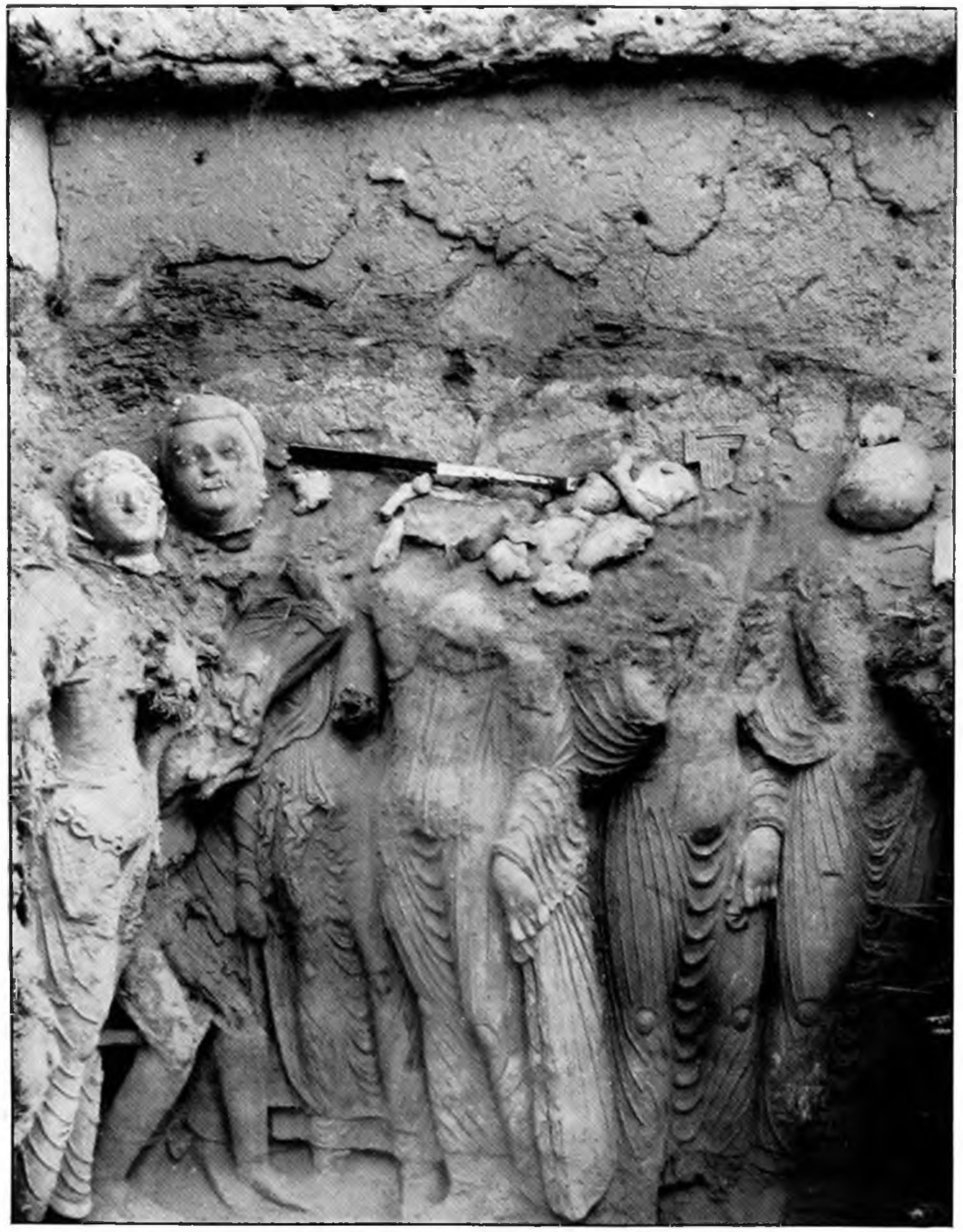
A group of closely adjoining small cellas and Stūpas to the north of xvii yielded finds only in two places. From the little cella xx there were recovered fragments of ornamented bronze bands, Mi. xx. 001, and the well-carved wooden capital, Mi. xx. 002 (Plate CXXVIII), of Indo-Corinthian style decorated with acanthus leaves. On the base of the almost completely destroyed small Stūpa xix there turned up a fragmentary sheet of paper bearing cursive writing which looked like Turkish 'Runic' script, but has not yet been determined.

Structural features of shrine xviii.

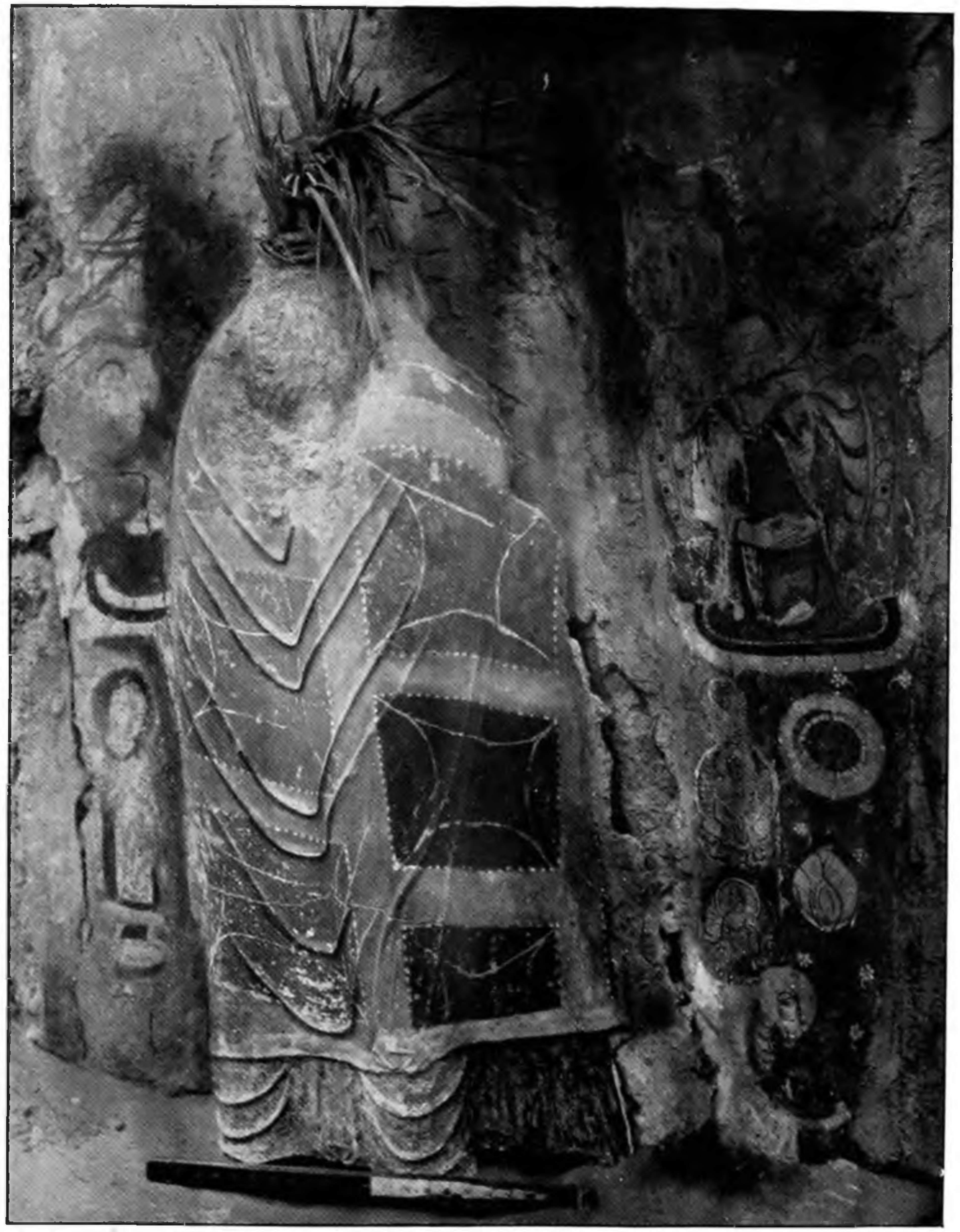
To the west of the group just mentioned there lie scattered half a dozen detached Stūpas and cellas, partly seen in Fig. 287 on the left. They form the north-west end of the site. None of them yielded any finds of interest except the shrine xviii, the last which remains to be described. It presented several unusual features. In the first place, it is worth noting that the ruin showed no sign of having suffered from fire, though marks of wilful destruction were only too obvious otherwise. From an outer court or verandah facing north-east there was entered a kind of antechapel about 17 feet square (Fig. 289) which does not appear to have been vaulted; for the débris which filled it lay only to a height of about 3 feet. Judging from the remains of wall-paintings found in its west corner, this antechapel must have been provided with a roof. So I suppose that it was built with timber, which in this case was not burned, but carried off for use elsewhere after the destruction of the site. Towards this antechapel opened a shallow cella, $9\frac{1}{2}$ feet by 6, surrounded on three sides by a vaulted passage a little over 4 feet wide which was in fair preservation but unfortunately showed only whitewashed walls.

Finds in antechapel and cella.

In the corners of the antechapel there survived only a statue base on each side of the entrance, and in front of them the miscellaneous rags of linen and silk fabrics, probably votive offerings, described under Mi. xviii. 0012. More interesting remains came to light on clearing the débris within the cella. The large image platform extending along most of its west wall retained only the wooden stumps of the stucco statues which once occupied it. But there was found also the profusely



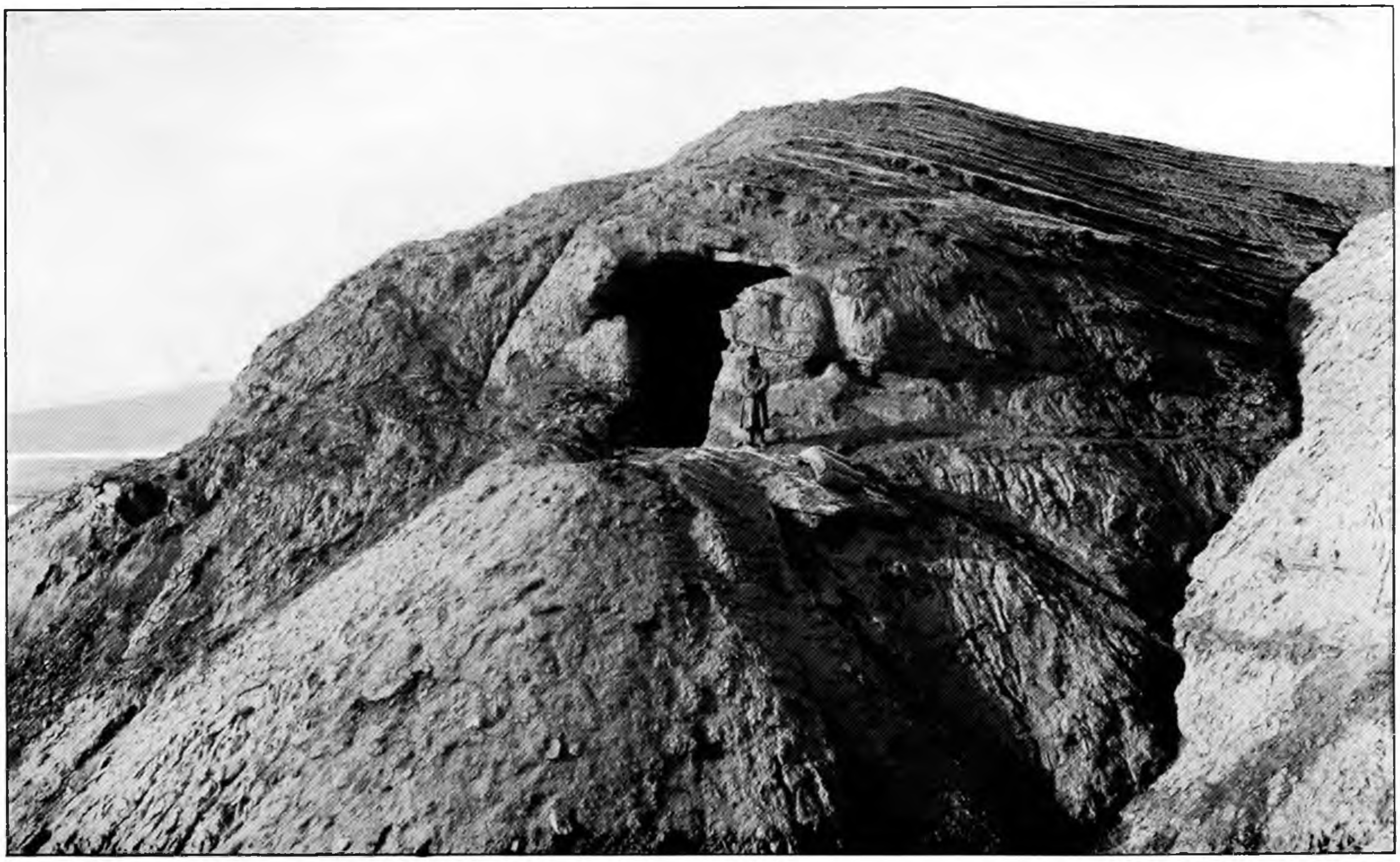
295. GROUP OF STUCCO RELIEVO SCULPTURES IN NORTH-WEST CORNER OF PASSAGE Mi. xii OF RUINED TEMPLE, 'MING-OI' SITE.



296. STUCCO RELIEVO AND TEMPERA PAINTING REMAINS ON N.E. WALL OF RUINED SHRINE F. XII, FARHĀD-BĒG-YAILAKI.

IV III I II

297. RUINED SHRINES OF KHŌRA SITE, SEEN FROM SOUTH-EAST.



298. ENTRANCE TO CAVE TEMPLE A, NORTH OF 'MING-OI' SITE, SHŌRCHUK.

decorated circular base, about 16 inches in diameter, which is seen complete in Fig. 290 and of which one half was safely brought away, Mi. xviii. 001 (Plate CXXXVIII).[9] The base was decorated with a floral design in relief, exactly alike on the front and back semicircle; its brilliant and harmonious colours had remained in excellent preservation. The main motif consists of a vase in the centre from which spread horizontally flowers resembling carnations and acanthus leaves. The same rich colouring survives on the large fragments from a seated and a standing Bodhisattva, Mi. xviii. 002, 009, both life-size (Plate CXXXVIII).

Relief statue of Bodhi-sattva, etc.

In much better preservation was the well-modelled relief statue seen in Fig. 290, showing a Bodhisattva in richly embroidered garments seated on a lotus base. The floral designs on the short upper coat and the robe enveloping the legs were very naturalistic in style, and recalled the workmanship of Chinese figured silks. This large image was found thrust into the entrance of the north passage, and may have been thrown down from the platform on the corresponding side of the cella. Its weight was much too great for removal. So, when the time came to have this like the other excavated shrines of the site reburied, I had it placed once more in the vaulted passage for safety. Two large torsos (see Fig. 290) of standing figures, which were found prostrate in front of the cella and had suffered far more damage, may have belonged to images of Dvārapālas. The life-size stucco arm, Mi. xviii. 003 (Plate CXXXVIII), showing a fine monster's head as shoulder-piece, must have belonged to a Lokapāla. Among other relief pieces, all still retaining their painting, may be mentioned the life-size Bodhisattva head, Mi. xviii. 0010 (Plate CXXXI), the curious figure of a child, Mi. xviii. 006 (Plate CXXXV), and the large hand holding a Buddha relief medallion, Mi. xviii. 005 (Plate CXXXVII).

Fresco fragment from ante-chapel.

The plaster surface of the walls outside the vaulted passage had disappeared everywhere, except in the west corner of the antechapel. There, at the foot of the wall, survived the curious fresco fragment, Mi. xviii. 0014, reproduced in Plate CXXVI. For a description of the scenes presented in its two panels I must refer to the List below. Here it will suffice to point out that the work in the upper one, though hasty, shows considerable skill in the spirited drawing of the dragon rising from the waves to attack a bare-legged man. In the lower panel nine short lines in Uigur script, by the side of the figures of the donors, remain to be read. The scene, or what survives of it, in the upper panel also still awaits interpretation. I may add here that a fragmentary paper leaf with Uigur writing was found on a low pedestal to the left of the cella entrance.

Ancient watch-tower to north of site.

Before leaving the 'Ming-oi' site I must briefly mention the conspicuous watch-tower solidly built of bricks which rises, as shown in plan Plate 51, on the top of the narrow ridge overlooking the main group of caves to north of the site. Owing to its commanding position the tower is clearly visible from the latter, as seen in Fig. 281. It measures about 24 feet square at its base, and still rises to a height of over 25 feet. When examining the tower on a hurried visit to the caves, I noticed the thin layers of reeds inserted at regular intervals between the courses of sun-dried bricks. They could not fail to recall the method of construction familiar to me from the ancient watch-towers of the Tun-huang Limes. But the true significance of the observation did not strike me until, when proceeding on my way from the Khōra site towards Korla, I passed another tower equally solid and of exactly similar construction perched on a high foot spur of the range, about $3\frac{1}{2}$ miles south of the former tower (see Map No. 49. B. 1). I shall have to recur further on to the question of the probable origin of these towers, and need add here only that the 'Ming-oi' tower must in fair weather command a very distant outlook over the Kara-shahr valley and be easily visible from Baghdād-shahri, only about $5\frac{1}{2}$ miles distant in a straight line. Adjoining its north face are

[9] The weight of the whole was too great for transport across the Kara-koram passes, and even the half removed had to be hollowed out to permit of safe packing as half a camel-load.

crumbling walls of a small enclosure. Marks of recent burrowing into the solid masonry suggested that the watch-tower had been mistaken for a Stūpa.

Section IV.—LIST OF ANTIQUES EXCAVATED AT THE 'MING-OI' SITE, SHŌRCHUK, KARA-SHAHR

Mi. i. 001. Stucco relief fr. Face of Buddha, about half life-size, ears and hair missing. Face round and straight-eyed; flesh painted dead white; eyebrows, outline and iris of eyes black; upper line of eyelid and lips red; corner of eyes, small moustache and imperial, blue. Ūrṇā on forehead, a red circle surrounded by red dots (damaged). For others see Mi. i. 002; vii. 003. Chin to top of forehead 3¾". Pl. CXXXII.

Mi. i. 002. Stucco relief fr. of face like Mi. i. 001, but larger. Only R. side preserved below eye and, to L., side of nose and mouth. Traces of black moustache line and dot for beard. Condition bad, and most of white surface gone. Lips red. Soft clay mixed with fibre. Chin to middle of nose 4".

Mi. i. 003. Stucco relief fr. of tile, as Mi. xxiii. 1. R. bottom corner including L. ear and ear-ring of Bodhisattva preserved. 5" × 4¾".

Mi. i. 004. a–h. Stucco relief frs. of a valance (imitating textiles), from border of some projecting cornice. Of these *b* and *h* only keep flat painted border from which valance was suspended. The central orn. painted on this is a flower with white centre, and five green petals outlined in white and vermilion. Outside this on either side are petals arranged like a fan, and painted with chocolate centre on rose, on cream, with vermilion outline. Outside again on each side is a series of crescents, blue, white (vermilion-edged), chocolate, rose, white (vermilion-edged), and green placed vertically. This seen well in *h*.

Below runs the heading of valance (best seen in *a* and *f*), consisting of row of white relief sqs. between two plain vermilion mouldings.

Below this is the valance itself: a row of triangular hanging 'swags' in relief, alternating with hanging tassels (best seen in *c* and *d*). Each 'swag' has an outer line of flame-filleted orn. in pale green; inside this a border like the heading above, but all red, and in centre a triangular design with half of four-petalled flower in white. Tassel hangs from red rope formed of circles bordered by mouldings. It consists first of two red rings, then row of blue petals, then two more red rings and final row of bells in pale green. Background between 'swag' and tassel red-brown.

In all fifteen 'swags' and five frs., fifteen tassels and two frs. preserved. *a* joins *b*. Plaster thickly mixed with fibres.

Combined length 4′ 6½". Width 6", of which smooth border is 1½". *g* and *h*, Pl. CXXXVII.

Mi. ii. 001. Fr. of wooden statuette; half-closed R. hand complete. Cf. Mi. ii. 009. No grooves. Shows plentiful traces of thick white substance on surface, probably once gilded or painted. Made separately from fig. Gr. M. 2¼"; across knuckles ⅞".

Mi. ii. 002. Stucco relief fr.; part of tile apparently from same mould as Mi. xxiii. 1. Bodhisattva head up to fillet and R. ear (rosette missing) and R. bottom corner of frame preserved. Gr. h. 6¼"; gr. width 6⅝".

Mi. ii. 003–4. Two frs. of painted stucco band, probably heading of valance like Mi. i. 004. Ground white, with pattern outlined in vermilion of series of lozenges leaving side triangles. Lozenges (white) have small inner lozenge, green or grey-blue, on which is vermilion or pale pink rosette with red-brown centre; triangles also vermilion or pale pink with red-brown centre. Surface worn. Soft clay mixed with fibre. 5¼" and 5½" × 2¼" and 1¼".

Mi. ii. 005. Fr. of plaster, gilded. Convex surface, perhaps from neck of figure. 2¾" × 2¼" × ⅜" to ¼".

Mi. ii. 006. a–b. Stucco relief frs. (*a*) Little and third finger of colossal R. hand; (*b*) probably forefinger of same hand. Traces of gilding on flesh and of dark paint (once red?) on nails. Nails 1¼" × 1¼". (*a*) 8¼" × 4"; (*b*) 5⅝" × 1¾".

Mi. ii. 007. Stucco relief fr. L. hand life-size. Hand outstretched along thigh shows under thumb fr. of green and red drapery. Broken below wrist. Plaster stucco on core of clay and fibre. 8" × 3¼" × 3¼". Pl. CXXXIX.

Mi. ii. 008 (marked wrongly ii. 001). **Stucco relief fr.** Rosette from head-dress of fig. like *Mi. xi. 00. Six petals and bead border; no colour. Diam. 2".

Mi. ii. 009 (marked wrongly ii. 002). **Fr. of wooden statuette.** R. hand with fingers folded in, prob. holding fold of robe. Only third finger complete. Cross groove under folded little finger is correctly given, but there is a deep groove meeting it lengthways along edge of palm which is quite unnatural. No paint. Made separately and glued on to fig. Gr. M. 3⅝"; across knuckles 1⅜".

Mi. iv. 001. Mould in plaster of Paris for casting seated Buddha (3½" × 2⅛" × ⅞"), pair of curls (like beard of Mi. xi. 00107), each 2" × 1" × ½", and pair of zigzag locks of hair. Here broken across, so that of latter only end of one and two curves of the other preserved (2¾" × ⅞" × ½"). All details of Buddha's head left for future treatment. Transverse hole through rounded end. 12½" × 6" × 1¼". Pl. CXXXVII.

Mi. v. 001. Stucco head of fig. of type *Mi. xi. 00. Head-dress above fillet, R. side of crown and face and L. ear missing. Chin to top of hair 3½".

Mi. v. 002. Pair of small turned wooden knobs. Painted red, blue, and yellow over white. Cf. Mi. xxiii. 0013, 0019–22. H. $1\frac{1}{4}''$ and $1\frac{1}{8}''$; diam. $\frac{7}{8}''$ and $\frac{3}{4}''$.

Mi. v. 003. Part of miniature carved wooden arch; curved piece of wood forming crown. Broken at one end; at the other a rabbet cut, and small dowel protruding, for attachment of continuation. Orn. with relief carving. In centre, apparently a flaming jewel (green) on lotus. On either side the heads and necks of two dragon-like beasts crouched upon the ground. These have no lower jaw, but a row of upper teeth and prominent eyes. The necks, which have hog's-back manes, are recurved over the head and back again so as to form an *S*. Manes vermilion; head and neck of outer pair blue, of inner pair red-brown (only traces of this left). Across arch $6\frac{3}{8}''$; width $1\frac{1}{4}''$ to $\frac{7}{8}''$; thickness $\frac{5}{8}''$. Pl. CXXVIII.

Mi. v. 004. Fr. of carved wood; straight, carved in relief with same animals as in Mi. v. 003. Broken each end, but probably belonged to the side supporting such an arch. Colour nearly all gone, but manes show vermilion, and one neck shows red-brown traces. Parts of four heads. $7\frac{1}{2}'' \times 1''$.

Mi. v. 005. Fr. of carved wood; flat, shaped and ribbed to represent a flame. Traces of red paint. Back plain. From sq. end projects a short tenon. Stuck to back, by mud, a small piece of loose-made cotton (?) cloth. $3\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{1}{2}''$.

Mi. v. 006. Half of wooden lotus block, painted red. See Mi. v. 0010. $6\frac{1}{4}''$ sq.; total thickness $2\frac{1}{2}''$.

Mi. v. 007. Piece of wooden framing; straight bar, oblong in section, with rabbet along one edge and two projecting tenons. In back is mortice at each end, where breakage has occurred. Apparently painted twice: (1) with blue strip between red borders, and (2) with a strip of gold between indigo borders. Second coat, which has mostly come off, has preserved under-coat. Slightly charred. $16\frac{1}{4}'' \times 2\frac{3}{8}''$ (with rabbet $2\frac{3}{4}''$) $\times 1\frac{3}{8}''$.

Mi. v. 008. Painted wooden plank; one end chamfered. In centre two slanting dowels. Covered, over dark red ground, with lattice-work of silver lines. The lozenges so formed are filled with stars made up of four silver lozenges rather irregularly placed. Triangles where design meets edges show either one or three lozenges. Touch of green and blue at chamfered end. $2'\ 5'' \times 3\frac{7}{8}'' \times \frac{5}{8}''$.

Mi. v. 009. Head of carved wooden elephant, from relief fig. Tusks, trunk, and R. ear missing. Below ear with attempt at foreshortened front view is L. forefoot, very short, and supported on small base. Through forehead dowel hole. Ear treated like fan in five folds. Vigorous but clumsy work, much decayed. $5\frac{1}{4}''$ (with foot) $\times 3\frac{1}{4}'' \times 2\frac{3}{8}''$.

Mi. v. 0010. Sq. block of wood; the top half cut down and lathe-turned into form of shallow cup with central round boss standing up to height of rim, i.e. a rough representation of lotus-flower on sq. base. Red paint over flower cup and part of base leaving plain border as if it had been set in a frame; centre of boss sunken and blackened. Dowel hole in middle of back. Prob. for wall decoration; cf. Mi. v. 006; vii. 0015. $6\frac{1}{4}''$ sq.; total thickness $3\frac{1}{4}''$, of which $1\frac{1}{4}''$ is that of sq. base.

Mi. vii. 1. Strip of painted and inscribed wood, from base of panel with painted figs. (?). Under-surface flat, with remains of gum; front rises at right angles to h. of $1''$, then slopes back at angle of $35°$; upper edge broken. L. end chamfered behind, to allow of fitting to return piece; R. end cut off straight and painted light red and green.

Sloping front painted with design of looped-up band, forming series of five semicircular spaces, in each of which hangs half-blown lotus on straight stem. Band outlining spaces seen at L. end to be looped along top to similar curving band. Colouring dark grey and light green, orange, pink, and buff.

Along perpendicular surface at bottom runs one l. Kuchean inscr., divided into five phrases by double black lines, and giving apparently names of divinities painted above the pendent lotuses. See below, Hoernle, Appendix *F*. Inscr. black on white ground, between red borders. Good condition.

$21\frac{1}{2}'' \times 3\frac{1}{4}''$.

Mi. vii. 001–2. Stucco relief frs. Top-knots of head-dress, type *b* of *Mi. xi. 00. Black paint on white ground. 001 has second upward twist of hair above, and wooden core perfectly preserved. *001*, H. $3\frac{7}{8}''$; *002*, $2\frac{3}{8}''$.

Mi. vii. 003. Stucco relief fr. of face resembling Mi. i. 001. Only mouth and nose left; bad state. Lips red, face white; no moustache. Soft clay mixed with much fibre. Mouth to top of nose $2''$.

Mi. vii. 004. Stucco relief fr., great toe. Nail cut short; groove across above nail. Traces of dark red paint. Length $1\frac{7}{8}''$.

Mi. vii. 005–6. Stucco relief frs. Top-knots of head-dress, type *b* of *Mi. xi. 00. Top painted red, horizontal twist black. Protruding wooden core. *005*, H. $2\frac{1}{2}''$; *006*, $2''$.

Mi. vii. 007. Stucco relief fr. Rosette, six-petalled, perhaps from head-dress; cf. those of type *Mi. xi. 00. Petals copper-green, veined, with sepals showing between; centre, a relief circle surrounded by beads, vermilion. One petal lost. Colour well preserved. Diam. $2''$.

Mi. vii. 008. Stucco relief fr. Side-rosette of head-dress, type *a*, *Mi. xi. 00. Shape of petals like Mi. vii. 007. Border of hollow centre beaded and vermilion. Petals show traces of green and purple. Diam. $2\frac{1}{8}''$.

Mi. vii. 009. Stucco relief fr. Finial of vesica; rosette with six petals (copper-green) and vermilion bossed centre, within a double ring border. Outer border of vermilion flames curling to R. Attached behind to stucco upright,

broken off just below edge of finial where it has begun to form two diverging bars. Diam. 2⅝″.

Mi. vii. 0010. Stucco relief fr. Rosette with seven pointed and veined petals within a bead border. The whole painted light green. Diam. 1⅝″.

Mi. vii. 0011. Stucco relief fr. Finial like Mi. vii. 009. One side missing. Border pink, petals red, centre orange. Diam. 2½″.

Mi. vii. 0012–13. Stucco relief frs. Two rosettes, having bossed centre within raised ring, and bead border. 0013 painted vermilion; 0012 shows remains of dark red. *0012*, diam. 1⅞″; *0013*, 1$\frac{1}{16}$″.

Mi. vii. 0014. Stucco relief. Possibly front view of flying bird, much conventionalized, or possibly profile view of conventional flower; cf. Yo. 00176; Khot. 007. Upper part and tail formed of bosses in relief. All detail lost. H. 2¾″.

Mi. vii. 0015. Half of wooden lotus block, as Mi. v. 006, 0010. Central boss broken off. Cup red with black rim and black bottom. Surface of square (not extending to edge) light green; square dowel hole behind. Cut across diagonal. Sides and back black. Length of side 7¾″, 1½″ to 2½″ thick; diam. of boss 5⅝″.

Mi. vii. 0016, 0018. Painted wooden panel in two pieces, showing standing Buddha, similar to Mi. vii. 0017, but with L. hand hanging at side. Padmāsana green, background maroon (Mi. vii. 0016 almost effaced). In lower R. corner of 0018 stands small hairy animal, white outlined black, with clawed feet and camel-like neck, looking up at Buddha. Buddha's flesh shaded with purple-pink. Work good. *0016*, 16″ × 5¼″ × ½″. *0018*, 16″ × 2⅝″ × ½″.

Mi. vii. 0017. Painted wooden panel. One edge split off and charred. Shows standing Buddha on white Padmāsana. Red robe, outlined red-brown, green under-garment outlined black, visible at ankles; L. hand at breast, thumb and finger together in attitude of argument. Nimbus in rings of red (outer), green, and pink; and vesica of red (outer), green, shaded purple, green, purple-brown, and green (inner); coloured bands divided by white lines. Outer edges, black. Flesh outlined red. Much abraded and head perished. Colour very soft and powdery. 16¼″ × 5¼″ × ⅝″.

Mi. vii. 0019. Painted wooden panel in Indian style, complete and in good condition. The return edge at each side shows the edge of painting from panels set at right angles to this one. The latter itself represents a Bodhisattva seated upon throne under flattened horseshoe arch. His R. hand at breast in *vitarka-mudrā*; his L. beside it, upright, with palm to breast and second and third fingers slightly bent. Face full, with straight eyes and grey-blue hair falling on shoulders; body broad-shouldered and slim-waisted; flesh painted dark-purple pink, shaded with red and outlined with reddish brown; eyebrows, eyelashes, and outlines of hair black.

Dress consists of grey robe or skirt enveloping the legs, a white girdle outlined with orange, and a grey-green scarf across breast. Jewellery of heavy necklace and ear-rings painted in orange, and bracelets and armlets (with a green jewel) represented only by red-brown lines; as are also the sandals. The massive tiara is in buff outlined red, with triple jewel in front (see the Indian Bodhisattvas on the Ch'ien-fo-tung banners, Ch. lv. 007, etc.) and streamers of red-brown drapery spreading downwards from each side and looped round arms.

Legs crossed at ankles and feet turned down with tips of toes only reaching ground (cf. Grünwedel, *Buddhist Art in India*, Fig. 139); under them a conventional lotus. The circular halo and oval vesica have orange and dark-red borders, and copper-green centres covered with zigzag rays, respectively of red-brown and yellowish green; background of niche grey. The throne is a plain oblong seat, the front divided into sq. panels subdivided by their diagonals into variegated triangles. The arch is painted in buff and orn. with a series of outline circles in reddish brown, and has scrolled ends. Capitals of pillars are shaped like inverted thistle-heads; bases the same, resting upon spheres, which are again protected by semicircular members rising from ground.

Half an inch of panel left bare at top and bottom, apparently for a covering framework. R. bottom corner is charred. Broken in three pieces, but joined; surface in excellent condition except towards lower edge. 15¾″ × 10¾″ × ½″. Pl. CXXIV.

Mi. vii. 0020–3. Four stucco relief frs. of floating drapery, white with orange lines in folds. Flat treatment. Gr. M. 6″.

Mi. vii. 0024. Frs. of painted plaster, backed with string matting, over clay mixed with straw. Surface concave; design undistinguishable, in black, pink, and blue. Plaster 6″ × 4¼″; matting 16″ × 8″.

Mi. vii. 0025. Fresco fr. showing upper half of seated (?) Buddha. Outlines and details black. Flesh pink, robe red-brown, vesica green with yellow outline, bordered with flame in red-brown on buff, on pink, on red. Outside again green. Careless work. Gr. M. 3⅝″. Pl. XII (wrongly marked Mi. vii. 0022).

Mi. ix. 001. Carved wooden panel, semicircular in cross-section, with rounded back and flat front, except for 2″ at lower end, where surface rises towards middle forming a two-sided projection triangular in cross-section. The sides of this projection form niches in which are carved small figs.: on L. a standing Buddha (?), with *uṣṇīṣa* but unhaloed, holding a staff in R. hand; L. hand, prob. with bowl, broken off; on R. two men kneeling with hands in adoration.

On flat front above two other groups of figs. in relief, one above the other. The upper group consists of a Buddha and attendant holding umbrella. Both standing ¾ to R. Buddha has halo, *uṣṇīṣa*, and elongated ears, but

is nude except for loin-cloth. His R. hand is raised in *abhaya-mudrā*, his L. hangs by his side in *vara-mudrā*. Attendant wears lower robe, and stole and necklace like a Bodhisattva; hair done in top-knot above fillet. Canopy of umbrella lost. The group below shows a Buddha in same dress and with hands in same attitude standing on a lotus base on L.; on R. kneel three small figs. one above the other. The two upper have their hands in adoration; the lowest prostrates himself with his head to the ground. His pose would suggest a representation of the Dīpaṅkara-jātaka (Foucher, *Art du Gandhâra*, pp. 273 sqq.) were it not for the lotus base of the Buddha and his unusual dress.

The carving carefully and delicately executed even to details of faces. Traces of paint remain here and there: black on hair of most of kneeling figs.; vermilion on background of the middle scene; red and blue respectively on backgrounds of niches in projection below, and red on robes of one of kneeling figs. on R. A bronze nail is driven through near R. edge to pin the upright to wall or background, and traces of other pins are seen at back. $10\frac{7}{8}'' \times 2\frac{1}{2}''$. Pl. CXXVII.

Mi. ix. 002 (marked wrongly 1. ii. 008). **Carved wooden bracket.** In form, an oblong block sq. in section. As seen from side the projecting part (two-thirds of whole) has its upper half cut in three receding mouldings (upper and lower straight, middle one rounded); and its lower half plain, ending in volute. Under-surface divided longitudinally by double string-moulding, with a fall in hollow of volute, and an oblong slanting member at the end forming the transition to moulding of upper half. Traces of red and blue paint remain, over white. The end fixed in wall has a 1″ sq. dowel piercing it perpendicularly. Roughly cut. Length $13\frac{1}{4}''$ (of which the projecting portion $8\frac{1}{2}''$), width $3\frac{1}{2}''$, depth 4″. Pl. CXXVIII.

Mi. x. 001. Stucco relief fr. Head of type *Mi. xi. 00. Head-dress above fillet missing. H. $2\frac{3}{4}''$.

Mi. x. 002. Stucco relief fr. of arm; see *Mi. xi. 00. Has rosette, twelve-petalled, with bead border. Diam. rosette $1\frac{1}{4}''$.

Mi. x. 003. Stucco relief fr. Body from neck to breast and L. hip. See *Mi. xi. 00. R. side gone. L. arm, broken at elbow, was bent forwards and has rosette at biceps, below which a fold of drapery crossed it. H. 5″.

Mi. x. 004-7. Stucco relief heads; see *Mi. xi. 00. *004*. L. ear and lobe of R. gone; plentiful traces of cobalt-blue on hair; fillet damaged, head-dress above missing. *005*. Head and hair blue, eyes blue over white, ears and nose damaged, head-dress above fillet gone. *006*. L. rosette on head-dress preserved, R. side of face decayed. *007*. Both side-rosettes of head-dress preserved; lobes of both ears damaged. H. $2\frac{3}{4}''$.

Mi. x. 008. Stucco relief fr. Top-knot of head-dress type *b* from fig. of type *Mi. xi. 00. Painted dark red. H. 2″.

Mi. x. 009-10. Two stucco relief heads of fig. like Mi. xi. 005. *009*. L. side and back of head missing. *0010*. Curls behind missing, trace of blue on head, surface perished. H. 2″.

Mi. x. 0011. Stucco relief fig. like Mi. xxvi. 002; crown to waist. Arms broken at shoulders, but L. was evidently stretched straight up and R. also raised. From backing made to take a corner, this fig. prob. stood last in a row on wall, and another fig. at right angles adjoined same backing. H. 4″.

Mi. x. 0012. Stucco relief fig., male, type of Mi. x. 0011, etc., but on larger scale. Head, arms from biceps, legs from above knees, and most of orns. missing. Fig. upright, nude but for loin-cloth, arms by sides. Face prob. as Mi. xxvi. 001. Moulded solid; transverse holes for pegs to fit fig. to wall. Cf. Mi. xii. 003, etc. H. 6″. Pl. CXXXV.

Mi. x. 0013. Stucco relief fr. R. hand of fig. like *Mi. xi. 00. Broken in middle of forearm. Two bangles round wrist. Held rod. Length $2\frac{3}{4}''$.

Mi. x. 0014. Stucco relief fr. L. hand of fig. like *Mi. xi. 00. Applied to bare side (?) over a band; broken just below wrist. Length 2″.

Mi. x. 0015. Stucco relief fr. Rosette, six-petalled with bead border. Diam. 2″.

Mi. x. 0016. Stucco relief fr. Rosette. Centre of large rosette like Mi. xi. 0075. Diam. $1\frac{3}{8}''$.

Mi. x. 0017. Stucco relief fr. Rosette with boss centre and bead border. Remains of gold-leaf. Diam. 1″.

Mi. x. 0018. Stucco relief fr. Head of man crying. Black hair (top-knot missing) prob. as type *a*, *Mi. xi. 00. Forehead wrinkled, brows contracted and hanging over so as to conceal upper eyelids; eyes narrow and long, slanting up to nose, with crow's-feet at outer corners; lower rim of socket clearly marked. Nose damaged. Mouth wide open, showing teeth (painted white; inside of mouth and lips scarlet); deep lines at corners. Ears missing. Face pink, brows black, eyes black and white. H. 4″. Pl. CXXXII.

Mi. x. 0019. Stucco relief fr. Grotesque head of old woman laughing. Hair parted in middle, combed straight down behind ears. Forehead wrinkled; brows bulging and overhanging; cheeks prominent; eyes therefore deep-set, long; deep slits in heavy lids. Nose sharp, mouth very long; cleft chin, neck emaciated. A very clever caricature. Chin to crown $1\frac{7}{8}''$. Pl. CXXXII.

Mi. x. 0020. Stucco relief fr. R. foot broken at instep. Nails well marked. Solid-cast; burned black. Across toes $1\frac{3}{8}''$.

Mi. x. 0021. Stucco relief fr. Prob. part of leg of elephant; for scale cf. Mi. xi. 00116-17. Band of small rosettes round leg with 2″ diam. bead-bordered rosette in front; from under this hang two bells, type of L.A. 00104. Length of fr. 4″; diam. of leg $2\frac{3}{4}''$.

Mi. x. 0022-3. Two stucco relief frs. Flame finials like Mi. xi. 0087. 0022 broken at top; 0023 broken at L. side. *0022.* Width $4\frac{3}{4}''$. *0023.* H. $4\frac{3}{4}''$.

Mi. x. 0024. Stucco relief fr. Tassel like that on Mi. xi. 3. Length $1\frac{7}{8}''$.

Mi. x. 0025. Stucco relief fr. End of drapery. On either side flame-like undulations, red, stream upwards from central stem, gilded. Complete both sides and top, broken lower end. $3\frac{1}{2}'' \times 1''$.

Mi. x. 0026. Stucco relief fr. Lotus (seven petals) like Mi. xxvi. 006, but smaller. Attached to stalk of clay, in which is hole for transverse dowel. H. $1\frac{1}{2}''$, diam. 2".

Mi. x. 0027. Stucco relief fr. Lotus with rosette centre and whorl of seven petals bending to R.; see Mi. xv. 0024. Traces of gilding and red paint. Diam. 4".

Mi. x. 0028-33. Stucco relief frs. Tassel-pendants from cornice of building; see Mi. xi. 00127. Traces of red and of blue on sq. caps (beam-ends) and of green on ball moulding. 0028–31 on large scale, as Mi. xii. 0031, measuring $2\frac{1}{8}'' \times \frac{15}{16}'' \times \frac{5}{8}''$ (the lowest member always missing); 0032–3 on same scale as Mi. xi. 00127.

Mi. x–xi. 001-4. Four frs. of glass from a bead-maker's workshop. 001 and 003 are short stems at the end of which is found a solid ball of glass; 002 has been similar, but the ball has been taken in the pincers and flattened when the stem was being drawn out into a rod. 004 has its bulb broken, but the rod has already been drawn considerably and is full of 'silk' veins. Being found in a temple these may be dedications by a glass-worker; but they do show a local industry. Gr. M. diam. *c.* $\frac{3}{4}''$. *002–3*, Pl. IV.

Mi. xi. 3. Stucco relief fig., female; upper half. Laughing face, mouth wide open, eyes screwed up, wrinkles in forehead and at corners of eyes, dimples in cheeks. Hair and head-dress (missing above fillet) of usual *Mi. xi. 00 type. Rosette missing from L. ear. Fig. wears outer garment having pointed corset below breasts, narrow shoulder-straps, and short sleeves, with stiff embroidered (?) trimming. Beneath this is tunic reaching high round neck with heavy collar and sleeves reaching to elbow. From back of head a cloak spreads out behind body on either side of elbows, and was then (cf. xi. 0052, etc.) brought across the hips and tied in a knot below the navel, whence it fell in loops to the knees. For dress cf. xi. 0051–5, 0072–4. In this case, however, part of cloak seems to have been brought across in front of L. shoulder. R. forearm, all L. arm, most of cloak, and body below waist missing. For figs. of same type, but mostly from different moulds, see Mi. xi. 0051–5, 0072–4; for a head of the same type, Mi. xi. 0082. H. 8"; chin to crown $2\frac{1}{2}''$. Pl. CXXXIII.

***Mi. xi. 00.** *General Note.*

Series of frs. from stucco relief figs. of Bodhisattvas. The heads are all from one mould; for the bodies two or three slightly differing moulds were used, and the fact that limbs, arms, attributes, etc., were applied separately leads to considerable variety in detail. The face is full and round, with fat creased neck, small chin; lips small, full, and bowed; nostrils small and sharply cut; corners of mouth deeply dimpled; nose forming straight line with forehead, narrow-bridged and sharp; eyebrows long, narrow, and arched; eyes prominent, continuing curve of forehead, but hollowed towards nose, with broad lids almost closed, only a narrow slit of the eyeball showing. Ears are elongated, the lobes hidden by jewelled disc ear-rings with beaded borders.

The hair is parted from centre and drawn loosely back under a fillet, making crescent-shaped curves that increase in size towards the ears. The fillet consists of a band of sq. beads, between plain borders. The top-knot (appliqué) above this generally corresponds to Mi. xi. 001, i.e. large lotus rosette with bead border in front flanked by two half-rosettes; through the centre of rosette over R. ear escapes a loose lock of hair, through that on L. a smaller lock (probably); this orn. conceals all the hair proper (type *a*).

Occasionally (type *b*) there is no such orn.; see Mi. xi. 003. Instead of the beaded fillet a linen turban encircles the top of the head twice, and from this ring rises a fan-shaped top-knot; the hair proper comes out from the side of this over the R. ear, is twisted and carried back through the turban, and the end escapes loosely over the L. ear. The arrangement of hair is the same in both cases, and in Mi. xvi. 001, etc. (cf. A. T. 0087), but is generally hidden by jewellery. The head is set at different angles on the body.

Body generally nude to hips (Mi. xi. 002, but cf. xi. 004); string of beads round neck, the ends brought again over shoulders and crossed upon breast, where they are secured by a circular brooch and are looped back again over the hips. R. arm hangs straight to elbow, and forearm is then bent up and slightly over chest (xi. 002) or held rather away from body and forward (xi. 0015). L. upper arm generally by side, forearm always missing.

From behind neck veil or mantle makes a background to nude part of body, curving behind it at level of elbows. Large floral rosette on each upper arm, and coiled bangle on R. wrist. Drapery wound loosely round hips and secured by knot on L. side, making (xi. 002) a decorative bunched end or (xi. 0021) a simple knot with long fold hanging between legs and a heavy loop across R. thigh (details being appliqué vary).

Body (total height of fig. being $2'\,1\frac{1}{2}''$) is disproportionately elongated; shoulders broad, waist absurdly small, and legs much too long. Fig. generally upright (but see xi. 001), resting on L. foot with R. knee very slightly bent and a slight curve therefore at thighs; its forms, like those of face, soft and feminine.

Figs. moulded in finely levigated soft muddy clay, reddish drab in colour when burnt; the moulding was hollow (see xi. 0016) and the separate parts were held

together by a core of similar clay strengthened by bundles of wood or reeds running up the centre. All have been accidentally burned.

A few figs. show traces of colour: flesh-tint was light red (xi. 002, 0040); jewels in hair red (0040); hair blue (0028, etc.) or red (0042); fillet binding hair gilt (0028, 0038); eyes blue over white; the colour of drapery has disappeared.

For frs. of similar figs., see Mi. x. 003; xi. 001–2, 004, 008–9, 0012, 0015, 0018, 0021–3, 0077, 0086; for heads only (type *a*) Mi. v. 001; x. 001, 004–7; xi. 0010–11, 0013, 0016–17, 0019, 0025–8, 0030, 0032–50, 0065, 0079–81, 0093 (large scale); (type *b*) Mi. xi. 003, 0020, 0029, 0059–62, 0078; for arms and hands, see Mi. x. 002, 0013–14; xi. 0070–1. For similar figs. on smaller scale, cf. Mi. xii. 001; xv. 006; and for heads, cf. Mi. xii. 002; xvii. 001. For specimens see Pl. CXXXIV.

Mi. xi. 001. Stucco relief fig. of type *Mi. xi. 00. Head, a variant; tilted up and back over R. shoulder. Body from different mould inclined to its right from hips upwards, and leaning back so that front forms convex curve from throat to navel. Cut off at thigh, the legs not being shown, but body issuing from some flat base. The attitude gives a more vigorous expression to fig. than is usual. H. 11¾". Pl. CXXXIV.

Mi. xi. 002. Stucco relief fig., best example of *Mi. xi. 00 type. R. arm broken at wrist, L. just above elbow; R. leg below knee and most of L. side from hip down wanting; also part of head-dress. Hole and impress of reed core visible at back. H. 1' 6¾". Pl. CXXXIV.

Mi. xi. 003. Stucco relief head, variant of *Mi. xi. 00, being on same scale but with face slightly less full, otherwise similar. Turban with top-knot (type *b*). Ears missing. H. 5⅜". Pl. CXXXIV.

Mi. xi. 004. Stucco relief fig. Variant of *Mi. xi. 00, body being draped. Body perhaps from same mould, but clay plastered on to denote close-fitting tunic looped from R. shoulder under L. arm; beaded bands over this with double rosette at crossing point. From R. shoulder a heavy cloak came down, hiding R. arm to wrist, and probably crossing body at waist (see xi. 0077). Body broken above waist, L. arm at elbow, R. arm at wrist; most of drapery missing. Head-dress above fillet, and rosette from R. ear gone. H. 9".

Mi. xi. 005. Stucco relief fig. of celestial attendant; youthful male type, cf. Mi. xi. 0064. Face round and soft; eyes nearly closed, lips full and dimpled. Rosettes in ears. Crown of head bald; over forehead hangs a flower-like lock divided into four curling tresses, and over each ear hangs a single heavy curl of hair. Body nude, with crossed jewel chains and central rosette; drapery looped from hips and knotted over each thigh (then broken away). Upper arms held slightly away from body and forearms bent forwards, drawing with them at elbows the veil which descends from head behind body like a vesica. Armlets with rosettes on upper arm, necklace round neck. For figs. from same or similar mould, see Mi. xi. 0024, 0066, 0083, and cf. xi. 0084; xv. 001. For heads, see Mi. x. 009–10; xxvi. 001. H. 7", chin to crown 1⅞".

Mi. xi. 006. Stucco relief fig., a variant of type *Mi. xi. 00, on smaller scale. Cf. also Mi. xi. 005. Head held up and turned slightly over L. shoulder; both arms stretched forwards (forearms lost), drawing with them at elbows the veil which descends on either side of fig. from back of head. Veil orig. painted blue. Jewelled bands as usual across chest; head-dress above fillet missing; broken off at waist. H. navel to top of head 5⅞". Pl. CXXXIV.

Mi. xi. 007. Stucco relief fig. Torso as Mi. xi. 006, but from different mould. Broken at waist and neck. Arms broken above elbow; L. was outstretched. H. 3".

Mi. xi. 008. Stucco relief fig. Neck to waist, of type *Mi. xi. 00. Arms broken at elbow. Surface much decayed. H. 7½".

Mi. xi. 009. Stucco relief fig. Body from neck to navel; type *Mi. xi. 00. Arms broken at elbow, both forearms bent inwards and upwards. H. 5½".

Mi. xi. 0010. Stucco relief head of type *Mi. xi. 00. Head-dress above fillet missing. In hair, traces of pale cobalt-blue. Cracked right across face at level of eyes. Chin to top of hair 2¾".

Mi. xi. 0011. Stucco relief head of type *Mi. xi. 00. Ears, nose, and head-dress above fillet missing. From angle made with background it is seen to belong to fig. of variant type xi. 001. Chin to top of hair 2¾".

Mi. xi. 0012. Stucco relief fig. Body from neck to waist of type *Mi. xi. 00. L. arm broken at shoulder. R. arm with rosette, broken at elbow. Either malformed or from slightly different mould. H. 5½".

Mi. xi. 0013. Stucco relief head of type *Mi. xi. 00, but small scale. Head-dress above fillet missing, also L. ear. Chin to crown 2⅛".

Mi. xi. 0014. Stucco relief fig. Body from neck to hips, from mould like Mi. xi. 0064. Head lost, and both forearms; but arms were held slightly away from sides, pulling mantle with them at elbows. The mantle is painted black between arms and body; and side-knots of drapery fastening the lower robe remain on either hip. H. 6".

Mi. xi. 0015. Stucco relief fig. Body from neck to waist of type *Mi. xi. 00. Apparently from same mould, but arms (broken above elbow) differently attached; both outstretched from shoulder, L. being higher. H. 6".

Mi. xi. 0016. Stucco relief fr. Face of type *Mi. xi. 00. Half R. ear left; other accessories broken away. Chin to top of forehead 2½".

Mi. xi. 0017. Stucco relief head of type *Mi. xi. 00. Head-dress above fillet and L. ear missing; R. ear and nose broken. Chin to top of hair 2⅞".

Mi. xi. 0018. Stucco relief fig. Body from neck to hips of type *Mi. xi. 00, but variant from different mould, more thick-set. From L. shoulder cloak with upper scalloped edge crosses body and passes under R. arm; heavy folds widening out and covering all R. side to hip. Both arms broken at shoulders. H. $6\frac{1}{2}''$; across shoulders $5\frac{1}{2}''$.

Mi. xi. 0019. Stucco relief head of type like *Mi. xi. 00, but on smaller scale. Head of figure similar. Head-dress above fillet gone. Both ears gone. Chin to top of hair $2\frac{1}{2}''$.

Mi. xi. 0020. Stucco relief head, variant of type Mi. xi. 003. Both ears damaged. Head-dress above fillet gone. Chin to top of hair $2\frac{3}{8}''$.

Mi. xi. 0021. Stucco relief fig. Body from thorax to L. ankle of type *Mi. xi. 00. Draped from hips with robe slightly knotted on L. hip and zigzag fold between legs; treatment sketchy, form attenuated. Rosette on band upon chest. H. $15\frac{3}{4}''$; across hips $3\frac{1}{2}''$. Pl. CXXXIV.

Mi. xi. 0022. Stucco relief fig. Lower part of body from waist to knees, of type *Mi. xi. 00, as the preceding. Drapery simply knotted on L. with plain fold between legs. Backing lost and hollows for cores seen. Each leg had a small core of reeds tied round with string that has left marks of spiral coil, with pieces of burnt string. Two holes as if cores had pegs to keep them from slipping. At waist the two cores were tied into one. H. $8\frac{1}{2}''$.

Mi. xi. 0023. Stucco relief fig. of type *Mi. xi. 00; lower part of body as the preceding, from waist to L. thigh and R. knee. Knot of girdle on L. hip not moulded, but applied strip of clay. H. $6\frac{3}{4}''$.

Mi. xi. 0024. Stucco relief fig. from mould like Mi. xi. 005. Broken at neck and hips, and arms broken at elbow. Blackened by fire. H. $5\frac{3}{4}''$.

Mi. xi. 0025-8. Stucco relief heads of type *Mi. xi. 00. *0025.* Head-dress above fillet and both ears gone; R. side of face decayed. *0026.* Head-dress above fillet and L. ear gone. *0027.* Head-dress above fillet and both ears gone; also most of interior of head. *0028.* Head-dress above fillet and lobes of ears gone. Face retains pink paint, hair traces of cobalt-blue, and fillet of gilding. Chin to crown $2\frac{3}{4}''$.

Mi. xi. 0029. Stucco relief head, variant as Mi. xi. 003. R. ear damaged. Head-dress above fillet missing. Chin to top of hair $2\frac{3}{4}''$.

Mi. xi. 0030. Stucco relief head, type of *Mi. xi. 00. Head-dress above fillet and L. ear gone. Chin to crown $2\frac{3}{4}''$.

Mi. xi. 0031. Stucco relief fr. Central and R. rosette from head-dress type *a* and of fig. like Mi. xi. 001. Diam. of central rosette $2''$.

Mi. xi. 0032-50. Stucco relief heads of type *Mi. xi. 00. *0032.* Head-dress above fillet missing, both ears damaged. *0033.* Front of head only; head-dress above fillet missing. *0034.* L. ear and rosettes from head-dress missing. *0035.* Head-dress above fillet and R. ear gone; nose and L. ear broken. *0036.* Front of head only; ears gone and nose damaged, head-dress above fillet missing. *0037.* Head-dress above fillet and both ears missing. *0038.* Lobes of both ears and head-dress above fillet missing. *0039.* Front of head only, ears and head-dress above fillet missing, nose damaged. *0040.* Both side-rosettes of head-dress preserved, L. ear gone. *0041.* Both ears damaged, traces of gilding on hair. *0042.* R. rosette of head-dress preserved, traces of red paint on hair, both ears damaged. *0043.* Both ears damaged, head-dress above fillet missing. *0044.* R. ear damaged, head-dress above fillet missing. *0045.* Traces of blue paint on hair, head-dress above fillet and both ears missing. *0046.* Same type, but on much larger scale; forehead damaged, ears missing and head-dress above fillet. H. $3\frac{3}{4}''$. *0047.* R. ear gone, L. ear damaged, head-dress above fillet missing. *0048.* L. ear gone, R. ear and fillet damaged, head-dress above missing. *0049.* Face only, ears and head-dress above fillet missing. *0050.* Face only, all accessories broken off. Chin to crown $2\frac{3}{4}''$.

Mi. xi. 0051. Stucco relief fig., fem., draped as Mi. xi. 3; head as type *Mi. xi. 00, but on smaller scale. Face round and soft with ear rosettes and head-dress (all above fillet missing) of usual type. Fully draped. Outer garment has pointed corset below breasts and is suspended by shoulder-straps having short sleeves attached; below this, close round neck, is tunic with heavy border and pleated sleeves reaching to elbows. Probably there was a cloak behind the body. H. $5\frac{1}{4}''$. Pl. CXXXV.

Mi. xi. 0052. Stucco relief fig. Torso, fem., draped as Mi. xi. 3 (q.v.), but from smaller mould. R. arm raised, broken at elbow; L. forearm crossing hip, broken at wrist. Drapery careless. Broken at knees. H. $7\frac{1}{2}''$.

Mi. xi. 0053. Stucco relief fig. Torso, fem., draped as Mi. xi. 3. Head and R. arm completely missing; L. arm broken above elbow. Shoulder shows R. arm not raised. R. side below hip missing. Rough work, much damaged. H. $10\frac{1}{2}''$.

Mi. xi. 0054. Stucco relief fig. Torso, fem., draped as Mi. xi. 3 (q. v.), but from smaller mould. Both arms bent upwards from elbow. Head gone. Broken at knees. L. arm split down centre; R. arm broken above wrist. H. $7\frac{3}{4}''$.

Mi. xi. 0055. Stucco relief fig. Torso, fem., draped as Mi. xi. 3, but on larger scale; neck to waist; R. side missing. L. arm broken above elbow, R. at shoulder. H. $5\frac{1}{2}''$.

Mi. xi. 0056. Stucco relief head, front of. Grotesquely fleshy eyebrows drawn in together and right down over eyes; eyes very full, with prominent eyeballs and baggy flesh below. Nostrils broad, mouth rather large; face full and round. Hair forms hard line round forehead and is combed up from forehead and ears to crown, but top-

knot is missing. R. ear and lobe of L. missing. For others from same mould with variations in applied details, see Mi. xi. 00101, 00107, 00122, 00123. Chin to crown 3¼". Pl. CXXXII.

Mi. xi. 0057. Stucco relief head, with head-dress like *Mi. xi. 00, type *a*, but face from different mould, probably like that of Mi. xi. 0058. Face here however larger, and forehead smoothed over, showing no wrinkles. Eyes round and wide open; mouth large; traces of cobalt-blue on hair and of pink on face. Head-dress above fillet missing, also R. ear and lobe of L. Chin to crown 3⅜".

Mi. xi. 0058. Stucco relief head, with head-dress of type *a*, *Mi. xi. 00; but face from different mould. Eyes wide open, with round prominent eyeballs; mouth rather long, upturned at corners; eyebrows drawn down over nose in frown giving severe and intense expression. R. ear, lobe of L. ear, and head-dress above fillet missing. Cf. Mi. xi. 0057. Chin to crown 3⅛". Pl. CXXXII.

Mi. xi. 0059. Stucco relief head of type *M. xi. 00, but on slightly smaller scale. Head-dress type *b*, but top-knot broken off. Chin to top of hair 2¾".

Mi. xi. 0060. Stucco relief head, variant of type *Mi. xi. 00, as Mi. xi. 003, except that instead of the lower twist of turban of type *b* appears the fillet of type *a*; L. ear gone, R. ear has rosette. Face retains plentiful traces of dark pink paint. Chin to top of hair 2¾".

Mi. xi. 0061. Stucco relief head; face from *Mi. xi. 00 mould; head-dress variant. Hair combed up in long locks from ears to temples; between these locks it forms over forehead a heavy sweeping curve. Above is single coil of hair and top-knot as of type *b*. Ears damaged. Chin to crown 2¾".

Mi. xi. 0062. Stucco relief head of type *Mi. xi. 00. Head-dress type *b* with twelve-petalled rosette with bead border, at base of top-knot. Lobes of both ears and curl issuing from top-knot missing. Nose damaged. Chin to crown 2¼". Pl. CXXXIV.

Mi. xi. 0063. Stucco relief head. Face placid, eyes half-closed, lips more natural, less bowed than usual. Hair gathered in broad folds, one in centre of forehead and three on either side down to ears, which last fold partially covered. These meet at crown of head and are bound round by hair or cloth (?), above which five emerge in plume fashion, folding back behind. On L. usual curl escapes below binding, on R. absent. Both ears missing. Chin to crown 2⅝". Pl. CXXXII.

Mi xi. 0064. Stucco relief fig.; young male type, wearing jewelled necklace, armlets, crossed bands, and veil or mantle as in *Mi. xi. 00 series, but head and fig. of wholly different character. A scarf with heavy scalloped border is also worn over L. shoulder, passing under R. arm and covering part of jewelled bands. Mantle is broken away close to fig., except over L. shoulder, where it stands up high; but it followed the arms closely to elbow, where both arms were held forward at right angles. Its possible relation to the head-dress is not clear. Both arms are broken short, R. at wrist and L. at elbow.

Face well-modelled, with a more normal proportion of cheek to features than in conventional Bodhisattva type; features handsome and clear-cut; and expression slightly scornful. Eyebrows prominent and drawn down in slight frown; eyes large and slightly oblique; nose a bold aquiline (tip broken); mouth wide and firm, but slightly smiling. Lobes of both ears broken off. Eyebrows and hair were painted black, and the coiffure was perhaps like that of Mi. xi. 0061; but only the coil on the forehead remains, and locks of hair brushed up (or down) from the ears. For another fig. of the same mould, see Mi. xi. 0014. H. 8", across shoulders 5". Pl. CXXXIII.

Mi. xi. 0065. Stucco relief head, of *Mi. xi. 00 mould; but hair brought low over forehead, altering look of face; curl over R. temple; otherwise head-dress missing. Chin to crown 2⅝".

Mi. xi. 0066. Stucco relief fig. like Mi. xi. 005. Broken at hips, and arms at elbows. The two locks of hair at back of bald head do not here hang down, but are tied up in knot at side of head. Tiny end of R.-hand lock missing, L.-hand broken short. H. 6".

Mi. xi. 0067. Stucco relief head of fig. like Mi. xxvi. 002. L. ear missing. H. 1½".

Mi. xi. 0068. Stucco relief fig. like Mi. xxvi. 002. Broken at hips, and all cloak missing. Arms broken at shoulders, but R. arm was stretched out, L. upraised. H. 4½".

Mi. xi. 0069. Stucco relief fig. like Mi. xxvi. 002. Broken at hips. Waist extra small (¾" diam.). L. arm gone; R. arm raised and bent over head, but broken below elbow. H. 4½". Pl. CXXXV.

Mi. xi. 0070. Stucco relief fr. R. hand of fig. like *Mi. xi. 00. Broken in middle of forearm; forefinger and little finger gone. Hand slender, fingers and thumb long. Two plain bangles round wrist, and parts of a third higher up. Fingers hold rod broken both ends. Length 3½".

Mi. xi. 0071. Stucco relief fr. L. hand of fig. like *Mi. xi. 00. One bangle above wrist, and traces of another higher up arm. Broken at elbow. Fingers bent as if holding something. Length 3¾".

Mi. xi. 0072. Stucco relief fig. Torso, fem., draped as Mi. xi. 3. Broken at neck and across thighs. R. arm complete and brought across in front of body. L. arm bent up from elbow, broken at wrist. Three bracelets on R. wrist, two extant on L. Cloak above shoulder has rayed border like vesica. H. 10". Pl. CXXXIII.

Mi. xi. 0073. Stucco relief fig., fem., draped as Mi. xi. 3. Torso. Broken at neck and below hips. Below waist surface gone. Arms complete, but surface of L. above elbow gone; both bent up to hold breasts. Three bracelets on each arm. H. 9½".

Mi. xi. 0074. Stucco relief fig. Torso, fem., draped as Mi. xi. 3, but from smaller mould. Part preserved from above R. shoulder to R. knee; head, R. hand, L. shoulder and arm, L. thigh and R. leg below knee missing. R. arm bent up at elbow; forearm curiously channelled to express emaciation. Breasts not prominent. On R. shoulder ends of long hair suggesting head of type of Mi. xi. 00100, but smaller. By R. thigh ends of drapery floating upwards as if fig. was flying downwards. H. 9½".

Mi. xi. 0075. Stucco relief fr. of rosette. At centre six-petalled rosette with edges of petals convex. Hole at centre not pierced through. Outside and below six other petals (or leaves) long and deeply ribbed. Broken. Diam. 2¼".

Mi. xi. 0076. a–b. Stucco relief fr. of drapery. Curtain, hanging in a series of four heavy looped masses, divided by narrow vertical folds which spread forward on ground and form a zigzag border. 8½" × 6". Pl. CXXXVII.

Mi. xi. 0077. Stucco relief fig., a variant of *Mi. xi. 00, from same mould as xi. 004. Drapery all broken away; R. arm broken at shoulder, L. arm at biceps, body under breasts. H. 7½".

Mi. xi. 0078–81. Stucco relief heads of type *Mi. xi. 00. *0078.* Head-dress (type *b* as in Mi. xi. 0060) has top of and lobes of both ears missing. *0079.* Head-dress (type *a*) has lost rosettes but retains core; L. ear and lobe of R. ear missing; traces of pink and black paint on fillet. *0080.* Head-dress above fillet missing; ears damaged. *0081.* Head-dress (type *a*) has L. rosette and curl preserved; L. ear complete with rosette; R. ear gone; head posed as in Mi. xi. 001. Chin to crown, *0078* and *0081* 2¾"; *0079* and *0080* 2⅞".

Mi. xi. 0082. Stucco relief head of old woman laughing, as Mi. xi. 3. Lobe of L. ear, most of rosette on R., and head-dress above fillet missing. Chin to crown 2½".

Mi. xi. 0083. Stucco relief fig. from mould like Mi. xi. 005. Broken below hips, and arms broken at elbows; nose damaged. H. 6¾". Pl. CXXXIII.

Mi. xi. 0084. Stucco relief fig. like Mi. xi. 005, but from different mould, being slighter in proportion. Broken at neck and hips. No rosettes. R. arm bent up, broken at wrist. L. arm broken above elbow. Backing has clearly been fitted to a corner. H. 3½"; across shoulders 3".

Mi. xi. 0085. Stucco relief fig.; torso like Mi. xxvi. 002, bent towards L. p. below waist. Broken at neck and below hips. Arms outstretched to sides, holding out mantle, but R. arm broken above elbow and L. by shoulder; wears loin-cloth. H. 3½". Pl. CXXXV.

Mi. xi. 0086. Stucco relief fig. of type *Mi. xi. 00; lower part. Broken at waist and just below knees. Drapery below hips knotted in front. H. 5½".

Mi. xi. 0087. Stucco relief fr. Flaming jewel, perhaps finial to halo of large fig. Jewel circular, the upper part marked off by a crescent-shaped groove embracing the lower part, and surrounded by waving flames which rise to a point above. For others, see Mi. x. 0022–3; xi. 0088. H. 5¼", gr. width 4¾".

Mi. xi. 0088. Stucco relief fr. Finial like Mi. xi. 0087. Flames more numerous and smaller in proportion. Jewel circular within circular ring. H. 3¼", gr. width 3". Pl. CXXXVII.

Mi. xi. 0089–92. Four stucco relief frs. of conventional foliage; a frond, the tip curling to a spiral, the outer edge bordered by subsidiary spirals. 3" × 2¼". *0089*, Pl. CXXXVII.

Mi. xi. 0093. Stucco relief head, of placid conventional type like *Mi. xi. 00, etc., but on a large scale. Top-knot, probably of type *a*, broken above fillet. Lobes of both ears gone. Traces of blue paint on hair and red on face. Chin to crown 3¾".

Mi. xi. 0094. Stucco relief fr. of conventional foliage, type of Mi. xi. 0089; main spiral bordered on outside by three rows of close twisted ribbed spirals, the rows painted red, black, and red. 3" × 2¼". Pl. CXXXVII.

Mi. xi. 0095. Stucco relief head of grotesque type, half-human and half-bestial. Snub nose, ears pointed at top. Hair streaming upwards in straight locks. Eyes mere lumps outlined by oval incisions. Above (R.) and below (L.) appear L. and R. hand holding open the jaws, through which is being vomited or swallowed a skull with overhanging eyebrows and showing twenty teeth. Bottom of ears lost. H. 4"; H. of open jaw 1¾". Pl. CXXXIII.

Mi. xi. 0096. Stucco relief fig. of ascetic. Head, both forearms, and all below hips missing. Cloak behind shoulders, jewel-bands, and baldric precisely as in Mi. xi. 0064. Girdle-knot on each hip and top of skirt preserved. Fig. grotesquely emaciated; cf. xi. 0097. Both forearms held forward. H. 9"; across shoulders 4⅞". Pl. CXXXIII.

Mi. xi. 0097. Stucco relief fig. of ascetic (?). Head and part of chest to waist preserved. Body emaciated as in xi. 0096, with baldric, etc., but cloak comes over L. shoulder and hides L. side of body. Head, tilted slightly back, has high domed forehead from which hair is brushed up in a peak; from the sides, hair is brushed down behind ears. Brows drawn together, puckering forehead, and highly arched; eyes fairly open. Mouth long, deeply dimpled; upturned corners; deep creases from nostrils to lips. On chin short 'imperial' which mingles with fringe of hair that outlines lower jaw. L. side of lower jaw missing. Blackened by fire. Chin to crown 3". Pl. CXXXIII.

Mi. xi. 0098. Stucco relief fig. Torso of type *Mi. xi. 00, but instead of the usual rosettes skulls are used. On body alone there were eight (one hanging from necklace, three on each hand, and one where bands cross); of these three are missing. Broken at neck and by hips; both

arms gone. Cloak spread behind body; drapery over hips. H. 6¾". Pl. CXXXIII.

Mi. xi. 0099. Stucco relief head of young woman. Hair brushed straight back from forehead, and tied by a wimple that passes over crown of head and ears, and under chin. Eyes almost completely closed; mouth only moderately bowed. Beautiful modelling. Chin to crown 2⅝". Pl. CXXXII.

Mi. xi. 00100. Stucco relief head of old woman laughing. Mouth wide open showing upper row of teeth, heavy creases from nostrils to corners of mouth; forehead puckered and wrinkled, lines at corners of eyes. Hair brushed straight back from forehead and falling behind ears. Cf. Mi. xi. 0074, 00125. Chin to crown 3". Pl. CXXXIII.

Mi. xi. 00101. Stucco relief head. Face from mould like Mi. xi. 0056, but hair complete and differently treated. Turban comes across forehead, covering hair and forming one broad plaited roll, above which two ends make wavy top-knot. Hair on either side is brushed out round ears and falls straight to shoulders. Lobes of ears missing. H. 5". Pl. CXXXII.

Mi. xi. 00102. Stucco relief head of classical type with pointed curling beard and moustache. Brows contracted, wrinkling forehead and nose, but corners of mouth turned up, and prominent eyes normally open. Head-dress and hair as in Mi. xi. 0061. R. ear gone and lobe of L. Drapery going behind L. shoulder. Traces of dark paint on eyes, hair, and beard. For others of similar type, see Mi. xi. 00103–6. Tip of beard to top of head-dress 5". Pl. CXXXII.

Mi. xi. 00103. Stucco relief head, pair to Mi. xi. 00102; but after moulding heavy lines have been incised in cheeks and crow's-feet by eyes. L. ear gone. H. 5¼". Pl. CXXXII.

Mi. xi. 00104. Stucco relief head, bearded, as Mi. xi. 00102, but smaller. Turban different, wrapped straight across forehead, then aslant; the two ends twice interlaced, one then rising to form simple top-knot inclined to wearer's L., the other falling outwards over L. ear. L. ear missing, R. has rosette. Traces of dark brown paint on beard. H. 3¼". Pl. CXXXII.

Mi. xi. 00105. Stucco relief head from same mould as Mi. xi. 00104; cf. Mi. xi. 00102. Beard broken on R., and R. ear gone; also rosette of L. ear. H. 3¼".

Mi. xi. 00106. Stucco relief head from same mould as Mi. xi. 00102. Top-knot and lobes of both ears missing. H. 4".

Mi. xi. 00107. Stucco relief head. Face from same mould as Mi. xi. 0056, 00101, but hair differently treated from either, giving quite different appearance. It grows down in a point on forehead, and is brushed straight back from this and round temple in short wavy locks. Moustache, beard, and whiskers are added in appliqué work; moustache long and wavy; beard and whiskers formed of a series of separate curls that turn towards chin. Ears pointed like satyr's, with long lobes half hidden by whiskers. H. 3⅜". Pl. CXXXII.

Mi. xi. 00108. Stucco relief fr. of R. foot, broken at instep. Scale for figs. of *Mi. xi. 00 type. Across toes 1⅝".

***Mi. xi. 00109. Stucco relief head;** one from a series of figs. of warriors. Fig. from crown of head to end of coat of mail measured 16½" (feet and crest are always wanting), stood upright, and was seen full front.

Face has fierce expression well rendered; highly arched black eyebrows are drawn down and in at their inner corners, making vertical furrows in forehead and a ridge across root of nose. Eyes prominent with heavily marked lids, black lashes, and round protruding black eyeballs; nose slightly aquiline with sharply cut nostrils; mouth small and curved, full, with prominent hanging lower lip; chin cleft. Face a rather long oval, coloured red (with a good deal of ochre). Small black moustache and imperial; lips crimson.

On head a close-fitting helmet, of lacquered leather plates fitted with crest and cheek-pieces; a narrow plate hangs from rim down forehead to root of nose. Rim of helmet plain; three diminishing rows of plates, whose curved overlapping edges run right to left from front medial line, round helmet off to solid ring from which a bevelled boss rose to form base of crest. Over the temples came cheek-pieces, which were apparently continued round back of head. They were formed of two horizontal bands each containing two rows of leather scales, bordered and divided by plain rims; the plain border with a certain amount of scale-armour was continued under chin and united with gorget. From sides projected grotesque ear-pieces, formed of double incurved volute. The whole helmet seems to have been painted one colour, red or green. For heads, see Mi. xi. 00110–11, and xii. 009–13; cf. also Mi. xi. 00112.

Body wholly cased in scale-armour. From close under chin a smooth gorget (green) protected neck and upper part of chest. The coat of mail had a heavy rolled border; it came high up at back of neck, spread out to sq. points on shoulders and curved to meet just below collar-bone; from the fastening the two edges ran down together to belt. Sleeves were long.

Throughout two horizontal rows of scales form a unit and are divided from next two by a raised band; each unit is painted green, or red, or gilded, colours usually alternating. Border red. The belt is a double cord, red. Below it hangs a sq. cord-piece, with three double rows of smaller scales. The trousers apparently made in same piece; they are flat and baggy and have fringed ends reaching about half-way down shin. For bodies, see Mi. xi. 00112–13; xii. 0014–17; xv. 0018.

In his L. hand the warrior held a round shield fitted with arm-straps (xii. 0020). This was either plain with

five bosses and incised double circle round edge (centre blue, border and bosses red; xii. 0018, 0019), meant clearly of leather; or a bead border was added (xi. 00114); or the centre was occupied with an elaborate Gorgoneion relief (xii. 0020–2; xvii. 007). In this the head, with flame-like hair, prominent ears, prominent eyes set in boldly modelled brows, high cheek-bones, turned-up nose, grinning mouth with fang-like teeth and suggestion of lolling tongue, certainly goes back in all details to a classical prototype. This relief may be intended for metal; it is painted green against a red border. The L. hand moreover held a lance, added in wood (xii. 008).

This scale-armour, on which holes for thongs are clearly shown, is obviously of type of actual armour frs. from Mīrān fort (M. I. ix. 002, etc.). Mi. xi. 00111 (Pl. CXXXV) shows a variant of the helmet. In Mi. xi. 00109, head, ears, and plume missing; plastered with mud. Chin to forehead 2″.

Mi. xi. 00110. Stucco relief head of warrior; from same mould as *Mi. xi. 00109. Face only, colour well preserved on face, gone on helmet. Cracked. Chin to forehead 2″.

Mi. xi. 00111. Stucco relief head of warrior like *Mi. xi. 00109, but simpler and smaller. Five lines incised from brow to crown indicate nature of helmet. No colour. (Now joined to Mi. xii. 0015, 0017.) Chin to forehead $1\frac{5}{8}$″. Pl. CXXXV.

Mi. xi. 00112. Stucco relief fig. Head and bust of warrior as *Mi. xi. 00109, but on smaller scale. Face rounder, with deep incisions round eyes; broader nostrils. Ear-piece of helmet (L. only preserved) has double volute with fan-like projection above. Armour similar except that some scales are straight-edged. A lump of clay over R. breast may indicate a shield on R. arm. L. arm broken at elbow, held well forward. A thin decorated sheet of clay has been passed edgeways into body sloping from L. breast into waist. Possibly fig. riding, carrying shield on R. arm, holding reins in L. hand, and leaning heavily forward against high crupper. H. $5\frac{1}{4}$″; across shoulder $4\frac{1}{4}$″. Chin to forehead $1\frac{5}{8}$″. Pl. CXXXV.

Mi. xi. 00113. Stucco relief fig. Neck to waist of warrior as *Mi. xi. 00109, but on smaller scale. Arms broken at elbow. No colour. H. $3\frac{3}{4}$″.

Mi. xi. 00114. Stucco relief fr. Part of shield from warrior fig.; see *Mi. xi. 00109. Five bosses on field, and bead border. Traces of dark paint. About half of rim missing. Inside, impression of scale-armour. Diam. $3\frac{3}{4}$″.

Mi. xi. 00115. Stucco relief head of ram. Ears, horns, and neck gone. Bland expression. Four grooves over the nose above nostrils. Mouth shut. Eyes round and open. Length 3″. Pl. CXXXVII.

Mi. xi. 00116. Stucco relief head of elephant; round neck behind ears a triple chain. Head trapped with eight-beaded bands arranged in diamond network, with small rosettes at crossing points. Bands and rosettes mostly missing on R. side. The two outer bands pass under chin and join. The trunk coiled up short, its end open and very carefully done. L. ear was stretched out to show, but is broken. R. ear, laid back, is carefully grooved. Tusks lost from sockets. Eyes round and fierce. Broken off behind R. ear. Tip of trunk and ear vitrified. Cf. Mi. xi. 00117–19. *C.* 7″ × 6″ × 5″. Pl. CXXXVI.

Mi. xi. 00117. Stucco relief head of elephant, very like Mi. xi. 00116, but trunk was uncoiled. Under chin, instead of chain, elaborate row of rosettes. Most of head trapping, and trunk, tusks, and L. ear missing. Body broken off close to R. ear. *C.* 7″ × $6\frac{1}{2}$″ × 5″. Pl. CXXXVI.

Mi. xi. 00118. Stucco relief head of elephant, front view; smaller and simpler than Mi. xi. 00116, e.g. bands (almost all gone) were plain. Tusks, trunk, and ears lost. Perpendicular gashes at inside corners, horizontal gashes at outside corners of round eyes. Poor work. $5\frac{3}{4}$″ × $3\frac{3}{4}$″ × 3″.

Mi. xi. 00119. Stucco relief head and shoulder of small elephant. No head-stall. Tusks missing. Trunk in spiral, roughly rendered; R. ear rather summary. L. ear and lower part of body missing. 7″ × 4″ × $3\frac{1}{2}$″. Pl. CXXXVI.

Mi. xi. 00120. Stucco relief fr. of two-handled vase. R. handle broken. Handle on L. touches on outer side a background at right angles to main plane. Wide mouth, small neck ending in shoulder-ring. Shoulder bends at a sharp angle, and slopes away rapidly to base. Handles meant apparently to be bolted on. Imitation of metal technique. Against side to L. is stuck miniature jug with one similar handle rising to lip. Regular Greek style of vase. H. $5\frac{1}{4}$″; diam. of rim $2\frac{1}{2}$″; diam. of shoulder $3\frac{1}{4}$″; diam. of foot $1\frac{1}{2}$″. Pl. CXXXVII.

Mi. xi. 00121. Stucco relief fr. of tile as Mi. xxiii. 1, but showing slight differences in volute and bead orn. Plain border bisected by groove. Fine buff clay hard fixed. $4\frac{3}{4}$″ × $2\frac{1}{2}$″.

Mi. xi. 00122. Stucco relief head; face from same mould as Mi. xi. 0056 or 00101. Hair brushed up round ears under turban, forming plaited roll on forehead, above which rises second small coil and top-knot (of hair?). H. $4\frac{1}{2}$″.

Mi. xi. 00123. Stucco relief head; face from same mould as Mi. xi. 0056, 00101 (q.v.). Turban makes single twisted roll round head with loose top-knot hanging towards R. shoulder. Hair brushed up under it from round ears, and painted dark red-brown. No moustache, and ears not pointed, but curly beard and whiskers added as in Mi. xi. 00107; here, all curls but one broken. H. $4\frac{1}{2}$″. Pl. CXXXII.

Mi. xi. 00124. Stucco relief fr. Small lotus-flower of type Mi. xxvi. 006. Mark behind of stalk; cf. Mi. x. 0026. Diam. 2″.

Mi. xi. 00125. Stucco relief head of old woman laughing; pair to Mi. xi. 00100, but slightly different mould. H. 3″. Pl. CXXXIII.

Mi. xi. 00126. Stucco relief fr. of frieze of building with acroteria; see Mi. xi. 00127. Between two borders of nail-head moulding is row of appliqué rosettes on yellow (?) field; above, acroterion, triangular, with stepped sides, having scroll design on front. Cf. Mi. xii. 0028; Yo. 02; and Foucher, *L'art du Gandhâra*, i. Fig. 99. Acroterion $1\frac{3}{4}'' \times 2\frac{7}{8}''$; total 5″ long $\times 3\frac{1}{8}''$. Pl. CXXXVII.

Mi. xi. 00127. Stucco relief fr.; architectural. Corner of roof of building. From a roughly modelled mass representing the roof proper project two sq. beam-ends, each decorated with a framed quatrefoil of Gandhāra style; from each hangs an elaborate orn., $1\frac{3}{4}''$ long, consisting of three narrow rings, a ball, a single ring, and a long tassel with spreading ends. On beam-ends rests a narrow moulded member, showing a line of nail-head dots between plain borders. If Mi. xi. 00126 forms, as is probable, part of the same whole, this moulding was the lower frame of a $\frac{3}{4}''$ frieze decorated with formal rosettes with a similar moulding above, over which rose stepped acroteria or battlements decorated with a balanced design of spiral lines incised within a plain border.

Traces of dark blue on beam-ends, and of red on tassels (cf. Mi. xii. 0031–3); frieze border yellow (?); acroteria green and dark red (perhaps alternately). Cf. Mi. xi. 00128; for tassel pendants; see Mi. x. 0028–33; xi. 00129–33, 00136; xii. 0031–3; for acroteria, Mi. xii. 0028. Front face 5″ long, side face $3\frac{1}{2}''$. H. of pendant 2″; with frieze and acroteria 5″. Pl. CXXXVII.

Mi. xi. 00128. Stucco relief fr. of frieze like Mi. xi. 00127, but on smaller scale. Under-side of roof shows blue paint traces. Front face only; three tasselled beam-ends. $3\frac{1}{2}'' \times 2\frac{3}{4}'' \times 2\frac{1}{4}''$ to $\frac{3}{16}''$.

Mi. xi. 00129–33. Five stucco relief frs. Tassel pendants from frieze of building; see Mi. xi. 00127. 00133 is identical, but others on larger scale, viz. $2\frac{3}{8}'' \times \frac{7}{8}'' \times \frac{5}{8}''$.

Mi. xi. 00134. Stucco relief fr. Tree or plant; at top leaves curve out about a flat end in centre of which is hole. Prob. used as base of fig.; cf. Mi. xiii. 005. Same kind of leaf rises in five tiers, mostly broken. Rosette at bottom missing. Hole for wood core (sq.) up centre. No colour. Stood free, leaves on the top touching background. Soft clay, much broken. $6\frac{1}{2}'' \times 3\frac{1}{2}''$ to $1\frac{3}{4}'' \times 4''$ to $2\frac{1}{4}''$. Pl. CXXXVI.

Mi. xi. 00135. Stucco relief fr. of drapery from feet of fig. Very full with many folds. At upper edge a twisted band gathers it tightly in. Conventional folds along bottom. Traces of red paint. $4'' \times 4''$ to $2\frac{1}{4}'' \times 4''$ to 2″.

Mi. xi. 00136. Stucco relief fr. Central members apparently of large tassel pendant; see Mi. xi. 00127. Gr. M. $2\frac{5}{8}'' \times 2\frac{1}{4}'' \times 1\frac{5}{8}''$.

Mi. xi. 00138. Stucco relief fig. of horse and rider. Legs of horse missing, and whole of rider except arms clasped round horse's neck. These bare from elbow (where broken) and wearing three bracelets. Hands carefully made and nails marked.

Fig. probably fitted into a corner, for L. p. side was not (apparently) worked. If it was it is all missing, and the body is cut square across rump. Arched neck turned outwards, and mane cropped as in Greek art. Ears chipped off; eyes wide open, mouth shut; nostrils dilated. Core hole (for plume) visible between ears and under neck.

Harness consists of head-stall (no bit) of plain leather, with bell behind ear; tracing of beaded work from which hang alternate bells and tassels; breeching similarly decorated; double-peaked saddle with rounded saddle-cloth, and stirrup-leathers; no sign of girth, under-side being left rough. For 'horse millinery', cf. *Ancient Khotan*, ii. Pl. LIX, D. VII. 5.

Horse is of rather stocky breed, thick-set in body, thick in neck, with small head. The legs (cf. Mi. xii. 0023–4) seem to have been rather long and slender in proportion; in this it differs from the Shansi-Honan pottery figs. (T'ang dynasty), which it otherwise resembles. Work very realistic and vivacious. Length 10″; H. 9″. Pl. CXXXVI.

Mi. xi. 00139. Stucco relief fig. of horse. Same scale as Mi. xi. 00138 and probably pair to it, only L. side being worked, and rump similarly cut square. Harness similar. Head stretched forward and downwards as if in exhaustion, eyes wide, nostrils expanded, and lips drawn back. Very fine work. H. 7″; length $13\frac{1}{2}''$. Pl. CXXXVI.

Mi. xii. 001. Stucco relief fig. Male; type of *Mi. xi. 00, but from different and smaller mould. Head missing. Both arms apparently bent, but broken at elbows. Usual bands, but no rosettes. Draped below hips. Broken again half-way down shin. Lotus tassel hanging from girdle along R. thigh, and marking of L. knee and drapery as in Mi. xv. 006. Soft clay plentifully mixed with fibre. H. 11″; across shoulders $4\frac{1}{2}''$. Pl. CXXXIV.

Mi. xii. 002. Stucco relief head like Mi. xvii. 001. Top-knot and both ears gone, nose damaged. Lips crimson, flesh orange-pink, hair (including roll), eyebrows, and eyelashes black, white in corners of eyes. Chin to crown $2\frac{1}{2}''$.

Mi. xii. 003. Stucco relief fig. Kneeling male, nude except for loin-cloth, like Mi. x. 0012; but smaller scale. Head and R. arm missing; L. arm bent up to breast, hand missing; L. leg broken at knee, R. at calf. Body well modelled, in front only. Flesh red, loin-cloth green. Peg up back projects below. H. $4\frac{3}{8}''$; across shoulders $2\frac{1}{4}''$. Pl. CXXXV.

Mi. xii. 004. Stucco relief fr. Half-rosette; as Mi. xv. 0030. Traces of red and of gilding. Diam. 3″.

Mi. xii. 005. Stucco relief head. Head-dress of *Mi. xi. 00 tpye *b*, painted black. Face grotesque, of Mongolian type, weeping. Two heavy lines in forehead, brows contracted making ridge across nose; eyes narrow slits, making crow's-feet at corners. Nostrils broad and flat, making deep furrows in cheeks; mouth slightly open

showing upper teeth, corners pulled down. Face pink, eyebrows and lashes black. Ears missing. Cf. Mi. x. 0018. Chin to crown $2\frac{3}{4}''$. Pl. CXXXII.

Mi. xii. 006. Stucco relief head from same mould as *Mi. xi. 00109, but not in armour (only bar of helmet down forehead remains, being moulded with face). From below hair brushed straight up with slight twist to a point (broken). Face pink, lips scarlet; traces of dark red on hair. H. $4\frac{1}{2}''$. Pl. CXXXII.

Mi. xii. 007. Stucco relief male fig. (cf. Mi. xii. 003), sitting cross-legged. Head and arm gone, R. leg broken at foot, L. below knee. L. hand hidden. Flesh light red. Body well modelled; only seen from full front. Wooden peg up back projecting below. H. $3\frac{1}{2}''$. Pl. CXXXV.

Mi. xii. 008. Stucco relief fr. R. forearm and hand, prob. of warrior; see *Mi. xi. 00109. Long close-fitting smooth sleeve, fastened at wrist and projecting to cover back of hand. Painted blue and red. Hand (red) clenched, holding staff of spear (?). Length $4\frac{1}{4}''$. Pl. CXXXV.

Mi. xii. 009. Stucco relief head of warrior; see *Mi. xi. 00109. Colours of face well preserved. Gorget green. R. ear complete, L. damaged. H. $5''$. Pl. CXXXV.

Mi. xii. 0010. Stucco relief head of warrior; see *Mi. xi. 00109. Face only. Beard indicated by black dot below lower lip. Face colour well preserved. H. $3\frac{5}{8}''$. Pl. CXXXV.

Mi. xii. 0011. Stucco relief head of warrior; see *Mi. xi. 00109. Plume and ears missing. Surface poor, colours faint. H. $6''$.

Mi. xii. 0012. Stucco relief head of warrior; see *Mi. xi. 00109. Ears partly remain. Colours well preserved on face. H. $4''$.

Mi. xii. 0013. Stucco relief head of warrior; see *Mi. xi. 00109. Colour on face fair. Touch of green on gorget. H. $4''$.

Mi. xii. 0014. Stucco relief fig. Torso of warrior; see *Mi. xi. 00109. Broken at neck and across breast, arms broken at shoulder. Edging red, mail and gorget green. H. $3\frac{3}{4}''$.

Mi. xii. 0015. Stucco relief fig. Torso of warrior; see *Mi. xi. 00109. Broken at neck and above waist, arms gone. Mail green and gilded (?), edging red. H. $5''$; across shoulders $6''$. Pl. CXXXV.

Mi. xii. 0016. Stucco relief fig. Body of warrior; see *Mi. xi. 00109; from neck to hips. R. shoulder gone, L. arm broken above elbow. Paint mostly gone, but traces of red. H. $9''$.

Mi. xii. 0017. Stucco relief fig. Body of warrior from waist to bottom of trousers. Feet lost; see *Mi. xi. 00109. Mail green; centre edging, and scales at bottom, red. H. $8''$. Pl. CXXXV.

Mi. xii. 0018. Stucco relief fr. Shield; see *Mi. xi. 00109. Circular, with two incised lines near edge, and boss in centre with four smaller bosses round. Border and bosses red, rest blue. Inside is lump of clay, showing impression of chain armour. Through this passes spear of wood, broken each end. Diam. of shield $4\frac{1}{2}''$; length of spear $10\frac{3}{4}''$. Pl. CXXXV.

Mi. xii. 0019. Stucco relief fr. Shield as Mi. xii. 0018. Traces of red paint on front and semicircular mark where another shield has been stuck above overlapping it. Diam. $5''$.

Mi. xii. 0020. Stucco relief fr. Gorgon shield; see *Mi. xi. 00109. Behind is L. arm of fig., hand holding fr. of wooden lance. Diam. $4\frac{3}{4}''$. Pl. CXXXV.

Mi. xii. 0021. Stucco relief fr. Gorgon shield; see *Mi. xi. 00109. Border and hair red, face green. On the back has distinct impression of part of shield like Mi. xii. 0018, as if two figs. must have overlapped. Diam. $4\frac{1}{2}''$.

Mi. xii. 0022. Stucco relief fr. Gorgon shield, see *Mi. xi. 00109; impression on back of shield as Mi. xii. 0018. Face and hair green; border red (broken). Diam. $4\frac{1}{2}''$.

Mi. xii. 0023-4. Stucco relief frs. R. and L. forelegs of a horse; cf. Mi. xi. 00138-9. Rather slender, well modelled; sinews and hair of fetlocks carefully done; traces of red paint. Only L. side of each leg finished. Broken at joint with body; R. leg rather more bent than L., both free of ground, horse clearly prancing. Length $10''$. *0024*, Pl. CXXXVI.

Mi. xii. 0025. Stucco head and neck of camel, worked in the round though no paint is left on R. side. Core of grass tied with string protrudes. Head very naturalistic, mouth open and upper lip drawn back from teeth. Top of head and R. ear gone. Wooden guide-peg through nostrils. Fringe of long serpentine curls down front of neck, painted red. Elsewhere coloured terra-cotta pink. Lip to back of head $7\frac{1}{2}''$. H. $12\frac{1}{2}''$. Pl. CXXXVI.

Mi. xii. 0026. Stucco relief fr. Plait of hair of three strands, each strand divided in four by three grooves. Remains of dark grey paint over whole. Lock of hair off large fig. $5\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{3}{4}''$. Pl. CXXXV.

Mi. xii. 0027. Finial of miniature wooden Stūpa. A sq. flat slab rests on a cube. Above this lies a rounded cushion with a horizontal groove round it. Above this rises sq. 'tee' with thirteen 'umbrellas' (round). On two sides short sticks support lowest umbrella. $6'' \times 1\frac{7}{8}'' \times 1\frac{5}{8}''$ (at bottom). Pl. CXXVIII.

Mi. xii. 0028. a-c. Stucco relief frs. Three acroteria; stepped triangles with incised design of balancing spirals on either side of central line within plain border. Cf. Mi. xi. 00126, 00127; but these on larger scale. See also Yo. 02, and Foucher, *L'art du Gandhâra*, i. Fig. 99. *a* painted dark red, *b* and *c* green. $5\frac{1}{4}'' \times 3''$. *b*, Pl. CXXXVII.

Mi. xii. 0029. Stucco relief fr. Foliage, naturalistic. Traces of pale green paint. $4\frac{1}{2}'' \times 3'' \times 1\frac{1}{8}''$ to $\frac{1}{2}''$. Pl. CXXXVI.

Mi. xii. 0030. Stucco relief fr. Part of façade of building, showing R.-hand top corner. Below, an arched doorway with triple moulding, the innermost a flattened curve, the topmost carried to Tudor point; this set in rectang. frame of four narrow mouldings all on same plane as innermost moulding of doorway. The spandrels, on a plane *c.* $\frac{1}{4}''$ lower than this, are filled with narrow mouldings parallel to those of the frame. As the frame seems to have no upright on L. it was prob. carried on to enclose another arch or arches now missing. On R. it bounds the relief. Above this is a broad plain architrave relieved by a single beading along the top; it is $1\frac{3}{4}''$ wide, has about $\frac{1}{4}''$ projection, and on R. is continued $\frac{3}{4}''$ beyond upright of frame. Above it is a cornice $\frac{7}{8}''$ wide with similar projection and top beading, carried out $\frac{3}{8}''$ beyond end of architrave. On the top are signs as of appliqué acroteria, similar to but slightly smaller than Mi. xii. 0028. Traces of red paint over all. Plaster plentifully mixed with fibre. $9\frac{3}{4}'' \times 6\frac{1}{2}'' \times 1\frac{1}{8}''$. Pl. CXXXVII.

Mi. xii. 0031-3. Stucco relief frs. Tassel pendants from cornice of building; see Mi. xi. 00127. Below ball moulding is a leg-like member with splayed finial. Sq. caps (beam-ends) dark red, narrow ring-mouldings pink or gilt, ball moulding green, ring-moulding pink or gilded, 'leg' pink or dark red. $3\frac{1}{2}'' \times 1\frac{1}{8}'' \times 1''$. *0031*, Pl. CXXXVII.

Mi. xiii. 1-4. Series of adjoining fresco panels from east wall of chamber behind temple cella (for position see plan, Pl. 53). Height of panels 2′ 4″; the ground rich maroon, bordered by a horizontal yellow band above and below, and divided vertically into separate panels by similar bands. Beyond band at top are traces of adjoining paintings of different series. The material is coarse clay, mixed with straw; painting is in tempera on white slip. The colour range is limited, including besides maroon only light emerald green, a few shades of brick-red, pink, and flesh-colour, a dark impure yellow, grey, black, and white. The tints are harsh and muddy or thin; all outlines are in black. The interpretation of the scenes must proceed from left to right, following the order in which they were viewed by those performing the 'Pradakṣiṇā'. The panels are described here accordingly, and not in the order of their numbering:

(4) On L. a white-haired or shaven monk is seated on high four-legged red seat with sagging green cushion. His feet rest on sq. red and blue stool; a canopy hangs behind his head. He holds a tablet or leaf of Pōthī shape in his L. hand, and a pen or brush uplifted in R. Before him kneel four young monks, two above two; two of them also holding leaves and pens ready to write. The third has a leaf but no pen (evidently an oversight), and the fourth has his hands in attitude of adoration. In the sky a Gandharvī floats down from R. scattering flowers. Behind the old monk rises a tree, the foliage of which spreads over the canopy and was represented as a solid green patch on which were large circular flowers or fruits. But the paint has almost entirely disappeared.

(3) shows on L. an aged monk seated on a high sq. seat, his feet on circular footstool; small draped canopy with red and green streamers behind his head. His hands are raised before his breast and placed as in attitude of adoration, but held horizontally instead of upright. Before him kneel three young monks, staged one above the other, their eyes fixed on him and their hands in similar pose. In the sky appears a haloed Gandharvī, floating downwards on a cloud, and scattering flowers with R. hand from bowl in L.

(2) shows on L. five young monks grouped in tiers, with three haloed divine beings facing them on R. All kneel with hands in adoration, looking upward to sky in which Buddhist monk, unhaloed but encircled with fire, floats upon cloud. His hands are raised as though in blessing; the R. with palm outwards in usual fashion, the L. at right angles to it, perhaps intended to be directed towards monks on L. of scene.

(1) Side panel from recess, showing two Bodhisattvas kneeling one above the other, with hands in pose of adoration; lower almost completely destroyed. Above are floating clouds of flame.

The background throughout the scenes is powdered with yellow trefoils, and in (2) and (3) also by falling blossoms, red, yellow, green, and white.

Excluding the monk-teachers, the figs. are of very uniform type, but efforts have been made to characterize the young monks, especially in (2), by variation in line of cheek, angle of nose, colour of complexion, etc. They have for the most part short round heads with sloping foreheads, full heavy cheeks, round unobtrusive chins, long and straight or slightly aquiline noses, narrow oblique eyes, and small pursed-up mouths. Their hair is black and close-cropped, cut in far-receding points above temples and growing down to well-defined corner at level of ear; but there is no depending lock or whisker. The Bodhisattvas' faces are of similar type; but with no signs of individual character. The flesh of all is pink, varying from a deep, almost carmine pink to a light flesh-colour. In each the tint is uniform, but on top is executed exceptionally hard 'shading' in a darker tone to indicate shadow of eyebrow, folds in neck, and modelling of cheek and breast.

The most clearly characterized heads are those of the elderly monks; especially the one in (3), whose age is well expressed by horizontal wrinkles on forehead, sunken eyes, heavy lines from nose to mouth, and grey shading round mouth and chin. It is doubtful whether the teaching monk in (4) is intended to be white-haired or shaven. The usual contour of hair on the forehead is painted black, but the area of the hair is painted white—the only instance in which this is found. His flesh is pallid but unwrinkled, and he has a small flame (coloured yellowish grey) on L. shoulder and top of head. Its omission on R. shoulder is prob. owing to tree-trunk.

The teaching monks have under-robes showing at ankles and breast, and long mantles covering L. shoulder and arm and drawn partially over R. shoulder. The mantle of the teaching monk in (3) is light green lined with red; his under-robe dark yellow. That of the teacher in (4) is dark yellow spotted with red rosettes and lined with grey, his under-robe being green; and exactly similar garments are worn by the floating monk in (2). The younger monks wear short robes of light green, brick-red, or yellow with under-robes or linings of contrasting colours, their bare knees showing as they kneel. Their chests are bare, their R. shoulders partially covered except in one case where it is bare. The Bodhisattvas wear the usual dress and jewellery of the simpler type as in Ch. 0017, etc. In the floating figs. difficulty has been found with the unfamiliar position, and the drawing of limbs and drapery is confused.

The panels seem to represent the preaching in old age of two Buddhist saints, and their translation to the abode of the Devas on their death. The floating fig. in (2) is unhaloed; his dress also is monkish, and exactly like that of the teacher in (4), though the repetition of the same colours may have little significance where the range is so small. He differs from the seated monk only in his black hair and rejuvenated complexion.

The nature and use of the writing materials in panel (4) offer interest. The pens have pointed writing-ends, but broaden out at the other end, where they are cut off slantwise; they are like pens or styli much more than brushes, and there is no trace of the soft brush-end so obvious in Ch. lvi. 0033 and other of the Ch'ien-fo-tung paintings. They are, however, grasped half-way from the writing-end and held at right angles to the paper like brushes; and the leaf itself, though in Pōthī form, is held with its narrow end towards the writer—an attitude impossible for the writing of any Indian script. This is specially noteworthy in the teaching monk in (4) and the writing recluses in (5)-(8).

Condition good. Panels: H. 2′ 4″, width (1) 7″; (2) 1′ 7″; (3) 1′ 3″; (4) 1′ 6″. Length of series 5′. Pl. CXXVI.

Mi. xiii. 5-9. Series of adjoining fresco panels, from north wall of chamber representing in two scenes: (*a*) monks grouped before a Buddhist teacher or saint; (*b*) monks in retirement writing sacred texts. (The Arabic figures are arbitrary divisions, representing only the sections of the wall as cut up for removal.) The scenes are divided from each other, and bounded above and below where complete by a band of yellow as in (1)-(4); beneath the lower yellow band is represented a series of red stone blocks. The background is rich maroon with yellow trefoils in the few open spaces; the colours used are exactly those of (1)-(4) with the addition of light sepia and a dull grey-blue. The colours are here in cleaner and brighter condition.

Scene (*a*) is shown in panels (8)-(9), but only the lower half of the latter is preserved, and the outer corner of (8) is much destroyed. The colours used are the same as in (1)-(4) and the work is of the same quality.

On (8) are seen seven monks, three in upper and four in lower row, turned ¾ to L. All kneel except the two at R. end of bottom line, who sit cross-legged, the last of all being provided with a lotus *āsana* yellow and white-petalled, while the rest have only flat circular *āsanas* of an indefinite character. Behind them on R. edge of panel are two caves (empty), and above, a row of trees now mostly destroyed. In dress and appearance the monks are like the preceding, but their robes are drawn partially over R. shoulder. The two on L. (above and below) hold their hands out horizontally joined as in adoration; the two immediately behind them hold leaves, and the lower has also a pen. His knees, doubtless intended to be bare like those of the rest, have been painted dark grey, and the modelling of the breast is emphasized by a double line of ink, giving appearance of a girdle. The same, incomplete, is seen in one of the monks in (7). The third and last in top row also holds a leaf, but his R. hand is raised before his breast, thumb and forefinger joined and fingers bent. The monk below him turns round to the last monk (fourth) in bottom row, holding up his R. hand before the latter's face, with first and second fingers raised. This last holds R. hand in attitude of argumentation. In his L. hand he holds Pōthī-shaped leaves. The eyes of the main group are turned towards (9), in which another young monk prostrates himself before a seated fig. of which only the legs below the knees remain.

This monk is the most youthful-looking of all in series; his skin is a pale flesh-colour unshaded; he kneels with his hands laid together upon ground in pose of worship and his head bowed almost to touch them. His robe is red, his feet bare, his knees painted dark grey; a thin lock of hair passes across his shaven temple to his ear; beneath him a pale green mat. Robe of seated fig. is pink, with green under-robe. His seat is high, four-legged, with red framework and green drapery between legs. His feet rest upon a red four-legged stool, and he seems to hold a Pōthī leaf perhaps presented by kneeling disciple. In background is a rectang. stand with green framework, draped with yellow and red valance like the seat. It seems to be filled with Pōthīs tied up between boards and ranged on their long sides.

In scene (*b*) seven monks arranged in a double tier, three above and four below; each is seated ¾ to R. in a rocky cave, and writes with a pen-like brush upon Pōthī-shaped leaves held end-wise towards him (see Mi. xiii. 1-4). A small ink-pot or vase suspended at side of one cave (the bottom on R.).

The monks are of same physical type as in preceding series, and are similarly dressed in light green, brick-red, or dark yellow robes, R. shoulder being bare. All have their feet crossed, but they obviously sit upon low seats hidden by their robes, and not upon the ground. The monk at L. end top row is possibly an exception. Beneath each is an *āsana* represented by a flat circular patch in red or green.

The caves are represented like arbours, with arched entrances suggesting built stone-work in their trimness, and are framed by jutting rocks on which grow broad-leaved plants and pine-trees. They are painted light sepia smeared with red and heavily scored with black; interiors are greyish-blue. Outside each cave (except the bottom one on L.) is a red tripod table supporting a folding white table-top; on this again (outside top cave on L.) is a flask. It has an ovoid body with flat base, long neck, and sq. mouth.

Outside this cave and the one next it are pools (?) of green water, covered with broad-leaved plants and surrounded by circular white stone-work. At R. end of each line of caves appears a stream, painted in greyish blue, flowing in a cascade to the ground level. On further bank rises a tree, almost effaced in upper scene but complete in lower. It has a broad flat top painted solid green with four circular flowers or fruits, red with yellow borders; on the lower branch hangs a grey cloth, perhaps a votive offering. Of tree above only part of stem remains, and ends of cloth. Between the two caves immediately to L. are ends of similar drapery hanging beside a gigantic pine-cone; but all this upper corner is much destroyed.

Beneath the pine-cone is seen the head of a mountain sheep of Ovis Ammon or Poli type, browsing off rock plants, and on the crags of the cave below (last on R. of bottom row) is perched a goat or deer similarly engaged. This animal is painted in sepia with white breast, tail, and hind-quarters, and he has black horns set rather wide at base and curving outwards, then slightly recurving towards tips.

Condition good.

Panels: H. (when complete) 2′ 4″; width (5) 1′ 7½″, (6) 9″, (7) 1′ 4½″, (9) 1′ 9″. Length of series 7′. Pls. CXXV and (5–6) CXXIV.

Mi. xiii. 10. Fresco panel, incomplete, from west passage of temple, showing group of Buddhist disciples. They stand in two rows, six above and four below, and all are turned ¾ to L. with their hands in attitude of worship. The lower row are on a smaller scale than the upper; their feet and lower legs lost.

All are arrayed in light yellow or yellow-green robes, swathed closely round their persons, an edge drawn over the R. shoulder, and the loose end thrown back over L. Their robes are figured with repeating spots of rosette, palmette, or Chinese weeping-willow branch designs, executed roughly in red on the yellow and in grey on the green. Some have also a maroon scarf across the breast. The upper row show vermilion under-robes just covering their ankles. Beneath appear their feet shod in black slippers orn. with a row of white dots round the opening. From closed finger-tips of each monk in upper row issues a three-leaved spray which breaks monotonous row of pale heads on maroon background.

The figs. are erect and somewhat stiffly set; they have broad shoulders and slim waists. Their upper half, including the heads, is very well drawn; but in upper row this part of the fig. is much too large for the legs. The smaller figs. are better proportioned. The heads show a marked difference in type from those of the preceding frescoes (1)–(9). They are long and flat-crowned, with Grecian noses, moderately oblique eyes, and short ears. The line of forehead and cheek, and also of back of head, as seen in ¾ profile, is very straight; the chin broad and round and the mouth very small. The eyebrows are in only one case represented by single arched line; in the rest they are emphasized by four or five additional lines almost straight, but sloping upwards. A single line is drawn round the base of the neck. The hair is black and close-cut. In the figs. in upper line drooping moustaches and a small imperial are washed in in dull blue, while under-surface of chin is also so coloured. The flesh is painted a uniform pale flesh-colour of rather greyish tone; there is no shading, and no colour added for lips or the whites of eyes.

The drawing of the heads is exceptionally good and clean. A certain variety of expression is attained by slight variations in angle of eyes, direction of gaze, tilt of head, etc., while the third fig. in each line turns to his companion behind, breaking uniformity of pose in group. All outlines are black, and a band of white bounds the panel at upper edge.

The material is coarse clay, as in the preceding frescoes; the painting, in tempera, is by a lighter and more skilful hand. It is better finished, the drawing more careful and the colouring less crude and hasty. Except for some extensive cracks, surface well preserved.

H. 2′ 2″, width 2′ 7″. Pl. CXXIV.

Mi. xiii. 11–12. Pair of fresco panels from west wall of chamber behind temple cella (for position, see Pl. 53). The style and technique are those of the preceding series (1)–(9), and the colours the same with the addition of vermilion and a dull blue. The upper part of (12) is lost, but at bottom are seen the yellow band and red stone blocks as in (5)–(9). The background again is of maroon, sprinkled with yellow trefoils and large falling blossoms, red, dark green, and yellow.

In (11), which in position corresponds to (1), only two figs. kneeling one above the other, ¾ to R., with hands in adoration. The upper is a monk, in short green robe lined with yellow, kneeling on a yellow Padmāsana, his knees bare. Head of same type as that of former monks; but it has become effaced and been very badly redrawn; eyes and eyebrows lowered, while nose is shortened. Traces of orig. features remain. Below is a haloed Bodhisattva with dull blue stole and pink halo; dress and fig. as in Mi. xiii. 1–2, head uplifted. Below him is a stone-edged tank (?), similar to the one seen in (12). (Cf. water-pools in 5–9.) The coping is of grey arched stones, with carmine border, and the water green.

(12) is incomplete. The centre of interest lay evidently on R. of portion preserved, as the attention of most of figs. is directed that way. The subject cannot be identified. One small group on L. seems, however,

complete in itself. It consists of a seated monk with another kneeling before him, his hands horizontal in pose of adoration. The seated monk is in yellow robe and green under-robe; his R. hand in attitude of protection, L. hand on knee. He shows no sign of age like the other seated teachers. In bottom corner adjoining his seat is the corner of a water-tank; behind remains part of a funnel-shaped green object with yellow rim, perhaps foliage of a tree. The kneeling monk is also young; he wears a dull greyish-blue robe, and kneels on a vermilion mat. His head is peaked instead of rounded, the forehead receding. In top L. corner remains part of fig. in yellow robe kneeling on white lotus and apparently turned to L.

The rest of the figs. are turned to R. Chief of them is a monk in pale green robe, unhaloed but with red flames on head and shoulders, who sweeps down on clouds from L. The downward motion in this case is strongly emphasized by angle of legs and lower part of body, as compared with that of floating fig. in (2). His R. hand rests on cloud; his L. is upraised with thumb and forefinger joined and fingers extended. In R. top corner a monk in red-brown robe, kneeling on mat with hands joined (head lost). Behind him rises the trunk of a tree (?) entwined with green leaves; while on extreme R. edge is strip of a similar kneeling fig. in red and green robe.

Below is the kneeling fig. of a boy, prob. last of a row of worshippers. He is dressed in light green long-sleeved coat, sprinkled with large rosettes and girt with vermilion band at hips. He kneels on a checked buff and black mat with his hands together in worship and head slightly raised. Head and face are carefully drawn; face round and chubby, neck plump; a false outline of cheek has been corrected by a fine sweeping line. Hair is dressed in a peculiar fashion represented with great care. The crown is shaved, leaving only on the forehead a large triangular fringe, parted down the middle. Behind ear hangs long lock tied with red ribbon, with semicircle of small tufts at base.

The flesh of all figs. in (11) and (12) is a pale flesh-colour, tinged in some cases with grey, and quite unshaded. The heads are very well drawn except that of the retouched monk in (11); the hand and arms not so good. Surface considerably worn.

(11) 2′ 2″ × 6″; (12) 1′ 9″ × 1′ 5″. Pl. CXXVI.

Mi. xiii. 001. Stucco relief fr. Ear and hair of life-size fig. The two locks of hair blue, ear covered with gold-leaf. Length of ear 4″. Pl. CXXXIX.

Mi. xiii. 002. Fr. of lime plaster, strip grooved longitudinally, gilded on three sides. $1\frac{1}{7}'' \times \frac{5}{8}'' \times \frac{1}{4}''$.

Mi. xiii. 003. Carved wooden finial, gable-shaped, similar to Mi. xiv. 002, but much smaller. Angles of base more acute. Plain moulding down edge, within which is trefoil, rising from a half-rosette in relief; on top a square with quatrefoil like that of Mi. xiv. 002. Traces of gilding on white ground. Base angles broken off. H. 5″; base (would have been) $3\frac{1}{4}''$; thickness $\frac{3}{8}''$. Pl. CXXVIII.

Mi. xiii. 004. a–c. Stucco relief frs.; one straight and two curved half-round bands; apparently parts of a relief representing a snake (Nāga?). Curve (*c*) is best preserved; surface deep red with narrow white band along inside of coil whereon are diagonal black slashes (hair); on main girth of body are roughly drawn black rings and five-pointed flower-stars in gold leaf and black paint; (*b*) similar, but with more white and red paint lost; (*a*) also with more white, but surface much perished. Gr. M. $4\frac{1}{2}'' \times 2'' \times 1\frac{3}{8}''$.

Mi. xiii. 005. Stucco relief fr. Plant, prob. used as pedestal for fig.; cf. Mi. xi. 00134. At bottom a gilded rosette, from which rises a series of broad, deeply ribbed, but smooth-edged leaves painted pale green. Paint much discoloured. Charred wood core. Much broken. Gr. M. 5″.

Mi. xiv. 001. Carved wooden border, slightly curved; from vesica (?). Inner edge plain, outer carved in spiral flames, partly sunk work, and partly open-work. Once completely gilded. Much charred; broken at each end. $7'' \times 2'' \times 1\frac{3}{16}''$ (inner edge) to $\frac{5}{8}''$ (open-work edge).

Mi. xiv. 002. Carved wooden finial of small shrine (?). Solid block, in shape an isosceles triangle, with sq. fixed on to apex; from base projects tenon. Carved in relief. Sq. has within plain moulding a quatrefoil, once gilded. Triangle has plain moulding parallel to sides, with row of upward-pointing leaves. Outside and inside a long seven-lobed leaf springing from a half-rosette. Outer row of leaves shows traces of blue paint over a thick ground of white. Cf. Mi. xiii. 003. $9\frac{3}{8}''$ (tenon $\frac{1}{8}''$); base $4\frac{3}{8}''$; thickness $1\frac{5}{16}''$. Pl. CXXVIII.

Mi. xiv. 003. Painted wooden carving. Fr. curved in cross-section, carved on convex side; prob. part of side of circular casket; bottom chamfered towards outer edge; top flat, with traces of paint and holes whence projected outwards at an angle of *c.* 45° round sticks 1″ apart, perhaps for basket-work top. Along top edge, from under crescents composed of outer row of large beads and plain inner band (half flowers?), hang festoons of twisted drapery. Along base between two plain mouldings a row of elliptical jewels (blue?) with red bead setting, on green ground.

In central field, arcade. Short Indo-Ionic column (cf. Foucher, *L'art du Gandhâra*, Fig. 110) with lotus base (red and green), and sq. shaft (red) orn. with rope pattern in sunken panel, and black (blue?) capital. Indian horse-shoe arches (cf. Foucher, *loc. cit.*, Fig. 102), red. In spandrel, female bust (Gandharvi?) to R., flesh red, hair and details black. Under arch, fig. of Buddha seated on double lotus throne, head and body full front, legs profile to R. L. hand on knee, R. hand raised in *abhaya-mudrā*; double halo and nimbus. Vesica green with red border, nimbus blue with red border. Drapery red, hair black, face and hands gilded, with details in black; traces of

gilding in L. arm. Lotus has upper row of blue, lower of red petals.

Under arch to R. are traces of second similar fig. Background dark grey with traces of gilding. Across, from L. edge of halo of L. fig. to end of throne of R. fig. preserved. Colours much faded, wood sound. $4\frac{3}{4}'' \times 2\frac{1}{2}'' \times \frac{7}{8}''$ to $\frac{1}{2}''$. Pl. CXXVIII.

Mi. xv. 001. Stucco relief fr. of fig. similar to Mi. xi. 005, but from different mould. Head, R. forearm, and all below hips missing. Drapery behind body as xi. 005; ends of scarf(?) pass over R. elbow and L. wrist. L. arm held down and slightly out, with fingers straight. Clay rolls take place of jewel-bands. Moulded solid. H. $4\frac{1}{2}''$.

Mi. xv. 002. Stucco relief fig. Front of torso, to navel, of fig. of type *Mi. xi. 00, but on larger scale. Necklace (plain band one side, beads the other) has rosette at lowest point from which hangs a classical palmette. The usual crossed bands (also consisting of plain border and bead border) have rosettes below the breasts; and a five-petalled and five-sepalled lotus flower covers the crossing. On L. side, small four-petalled rosette. Rosettes covered with what is now dark grey paint. H. $7\frac{1}{2}''$.

Mi. xv. 003. a-c. Stucco relief frs. of jewel-bands, from fig. like Mi. xv. 002. (*a*) Rosette from crossing bands, five-petalled; (*b*) strip of band with four-petalled rosette, pale yellow; (*c*) rosette with bead border and boss centre within plain ring. (*a*) Diam. $1\frac{1}{2}''$; (*b*) length 2"; (*c*) diam. $1\frac{1}{16}''$.

Mi. xv. 004. Stucco relief fr., palmette pendent from necklace, as in Mi. xv. 002. Length $1\frac{1}{8}''$.

Mi. xv. 005. Stucco relief fig. Torso, draped fem. Head, R. arm, L. hand, and all below hips lost. Tunic draped from a band which comes down from shoulders and across front of body below breasts, forming a sq. décolletage. Cf. Mi. xi. 3, etc., where the breast is covered by an inner vest. Band lost on R. shoulder, but on L. and across front bordered with fringe of sq. tabs. Behind, a cloak all broken away. L. arm held slightly out from body and doubled up from elbow, hand gone. Arm bare except for double bracelet on upper arm. Legs were applied separately. H. $5\frac{3}{4}''$: across shoulders $3\frac{3}{8}''$. Pl. CXXXV.

Mi. xv. 006. Stucco relief fig., waist to mid-shin, from mould similar to Mi. xii. 001, but on smaller scale. Palmette tassel on R. thigh, and incised circle marking L. knee. H. 5".

Mi. xv. 007. Stucco relief fr. Pair of hands palm to palm as in adoration; broken off at wrists, and thumbs gone. Along outer meeting edges of hands is chain of five rosettes—two circular with bead borders, three quatrefoils; those at top and bottom broken. Length $3\frac{3}{4}''$.

Mi. xv. 008-9. Two stucco relief frs. of arms, prob. from same large fig. 008 shows long ringlets and double armlet with rosette below. 009 shows long locks with curled ends and ringlets, but no orns. Length of each $3\frac{1}{2}''$; diam. of *008*, $2\frac{1}{2}''$.

Mi. xv. 0010. Stucco relief head. Hair falls over forehead in fringe of short curls and hangs in long waved tresses upon shoulders and upper arms (cf. xv. 008, 009), on top of head gathered within fillet; top-knot broken, prob. of type *a*, *Mi. xi. 00. In front of fillet a string of beads with quatrefoil rosette lies loosely on hair. Oval face of delicate Gandhāra type; high smooth forehead, arched brows, prominent eyes nearly closed, and very long; short curved lips and deeply dimpled cheeks; lobes of ears broken. Chin to crown $4\frac{1}{4}''$. Pl. CXXIX.

Mi. xv. 0011. Stucco relief fr. of six-petalled rosette within bead border, partly destroyed. Prob. part of head-dress of type *a*, *Mi. xi. 00; for there is hole through backing for a core, part of lock (?) coming through centre. Diam. $2\frac{3}{4}''$.

Mi. xv. 0012. Stucco relief fr. Flat piece of drapery folded over at edges, making zigzags down each side of central V-folds. $6'' \times 3''$.

Mi. xv. 0013-17. Stucco relief frs. Human feet; 0014 and 0016 prob. a pair; 0015 and 0016 broken above ankle, rest at instep. About right scale for figs. of *Mi. xi. 00 type. Length of foot 3" to $3\frac{1}{2}''$. *0015* and *0016*, Pl. CXXXIII.

Mi. xv. 0018. Stucco relief fig. Lower half of warrior, as *Mi. xi. 00109, but on smaller scale; broken just above waist. L. hand appears resting on hip. R. leg broken below armour, L. at ankle. No cord-piece. Legs rather apart. No colour. H. 6".

Mi. xv. 0019. Stucco relief fig. of bird flying R. Tail, tip of upper wing, and all lower wing missing. Wing feathers done by straight parallel lines in two planes, the lower being near tip of wing. Feathers on body done by curved short incisions concave to head. Hooked beak. Bird prob. eagle; cf. flying birds on Greek vases; stood out *c.* $1\frac{1}{2}''$ from wall-face, to which it was fixed by lump of clay and peg. Beak to back of (broken) wing $3\frac{3}{8}''$.

Mi. xv. 0020. Stucco relief fig. of bird, like Mi. xv. 0019, but flying L. Extreme tip of top wing, tip of beak and tail, and bottom wing missing. Tail narrow, but prob. spread into a fan. Stood out 2" from wall-face. Beak to back of (broken) wing 4". Pl. CXXXVI.

Mi. xv. 0021-8. Stucco relief frs. Lotus flowers as Mi. xxvi. 006; but 0024 has seven petals all curved in one direction (cf. Mi. x. 0027), the central rosette being as in the others. Diam. *c.* 4". *0024*, Pl. CXXXVI.

M. xv. 0029. Part of carved wooden arch, prob. border of vesica. At one end tenon, at other mortice; fr. therefore complete in itself. On lower (concave) edge is a broad rabbet; two wooden dowels driven from top edge into this and protruding. Back once painted in

colours on white ground; subsequently this was covered with canvas.

On front five figs. of Buddha, each seated on lotus throne; the lower figs. have flame-bordered vesica behind filling up ground space. The two upper figs. are placed radially to edge, the three lower are perpendicular, one below the other. Three arrangements of dress: (*a*) from R. shoulder mantle is brought straight down to wrist, hiding contours of body, while from L. shoulder it follows closely body and arm curves, edge of inner robe diagonal across chest from L. shoulder; (*b*) whole drapery close-fitting, the folds regularly looped from both shoulders across middle of chest; (*c*) from both shoulders mantle hangs straight to wrists, which rest in its folds; inner robe diagonal from L. shoulder across chest.

The whole richly gilded and in good preservation, except that one end is charred behind. For fr. of similar arch, see Mi. xxv. 001–002. $2' 0\frac{3}{4}'' \times 4\frac{7}{8}'' \times 9\frac{3}{8}''$. Pl. CXXVIII.

Mi. xv. 0030 (marked wrongly x. v. 001). **Stucco fr.** Top-knot of head-dress as in type *b*, *Mi. xi. 00. Curl on L. missing. H. $2\frac{1}{2}''$.

Mi. xv. 0031 (wrongly marked 0012). **Wooden statuette** of Lokapāla. Both feet missing, and both arms below the elbow, where they were bent; R. shoulder and R. side of head charred away; nose worn flat. Fig. of much character and dignity; good specimen of Chinese work of T'ang period.

Body thick-set and rather stout, but held very erect; shoulders thrown back, and legs planted firmly somewhat apart. Face long and clean-shaven with prominent cheek-bones, square jaw and long straight mouth giving a decided expression. Head bare with long straight hair drawn up under a fillet and wound in knot on top of head.

Dress that of Lokapālas in the Ch. paintings (see *Ch. 0010, *General Note*), but scales of coat of mail are not represented. It is finished off by a tagged or kilted fringe at mid-thigh, and beneath appears the inner robe, leaving the knees free and flying in long draperies between and behind legs. Robe also shows at the elbows in long loose sleeves ending in a knot at level of mid-thigh. There is no corslet or breastplate. Over shoulders a mantle, knotted under chin and falling behind in wide flat folds to the ankles. Traces of black paint remain here and there; but the surface is generally much worn. H. $9\frac{1}{2}''$; across shoulders $3\frac{1}{4}''$. Pl. CXXVII.

Mi. xvi. 001–3 and 0014–17. Stucco relief frs. of tiles with Bodhisattva head in centre like Mi. xxiii. 1, but from different mould. Head narrower and in higher relief, with small straight mouth and straight eyes; holes punched for pupils of eyes, nostrils, and corners of mouth in 001 and 0014–17. Small rosette in ears. Hair done in high conical top-knot with large rosette in front, and a half-flower of different type at sides with bud or tassel projecting horizontally from centre. Below these stand out, also horizontally, on either side, a loop of hair (generally on L.) and a small waving lock (generally on R.). Background almost entirely lost in all cases. All of red clay, fired, and later burnt accidentally.

001. Head and head-dress complete except for tassel on L. side of head; part of background also preserved with bead orn. and radiate border of halo. H. 6″.

002. Sand-encrusted; side orns. of head-dress lost except tassel on L. side of head; background broken off all round. H. $6\frac{1}{8}''$.

003. Sand-encrusted; background, R. side of head, and orns. on L. side lost. H. $7\frac{3}{8}''$.

0014. Side flowers of head-dress lost, and tassel on R. side of head; part of background preserved on R. H. $6\frac{3}{4}''$.

0015. Sand-encrusted; side orns. of head-dress lost, and rosettes of ears. Background broken off all round. H. $6\frac{1}{2}''$.

0016. Side orns. of head-dress lost; part of background preserved on R. H. $6\frac{1}{4}''$.

0017. Orn. on R. side of head lost, and rosette of R. ear; nose chipped. H. $6\frac{1}{2}''$.

Mi. xvi. 004–13. Stucco relief frs. of tiles with Bodhisattva heads in centre as Mi. xvi. 001; cf. also Mi. xxiii. 1. Head-dress identical with that of xvi. 001, but face from different mould. Face very broad with prominent wide-opened eyes set far apart; brows drawn down making wrinkles between eyebrows and across nose; nostrils sharply cut, mouth small and full. In 008, 009, and 0013, no rosette was applied to front of head-dress, and coil of hair and top-knot are exposed. Background mostly missing in all cases, but prob. similar to that of Mi. xxiii. 1. All of dark grey stucco, burned. Face 3″ high × $3\frac{1}{2}''$. *004, 008*, Pl. CXXIX.

Mi. xvi. 0014–17. Stucco relief frs. of tiles; see Mi. xvi. 001.

Mi. xvii. 001. Stucco relief head, like Mi. xi. 003, but on smaller scale. Head-dress type *b*, complete. Rosette of R. ear gone, and whole of L. Remains of paint, on lips crimson, skin orange, eyelashes and eyebrows black. Traces of black on top-knot, on two twists, and on row of upward curls bounding forehead, suggesting that all these are hair (?). From same mould as Mi. xii. 002. H. $4\frac{3}{4}''$.

Mi. xvii. 002. Stucco relief fr. Top-knot of head-dress of type *b*, *Mi. xi. 00. H. 4″.

Mi. xvii. 003. Stucco relief head, approaching life-size. Head-dress (type *a* or *b* of *Mi. xi. 00) above fillet missing. Hair brushed up from smooth forehead; eyebrows hardly marked. Eyes slightly oblique, deeply sunk, with sharply cut lids and hollows for pupils. Nose very thin and sharp; lips just parted. Face oval, with small ill-defined chin. Ears missing. Chin to crown $6\frac{1}{2}''$. Pl. CXXX.

Mi. xvii. 004. Stucco relief head, almost life-size. Hair done from crown in four rings of flat individual curls turning to L. or R. away from central parting (many missing). Very low forehead. Eyebrows prominent, arched, and contracted over nose; prominent eyes with sharply cut lids and holes for pupils. Short nose and upper lip. Lips thick and pouting, with deep dimples at corners. Remains of black (?) paint over face, and red

on hair. Ears missing except tip of R., which is pointed. Face generally heavy and disagreeable. Chin to crown 8". Pl. CXXX.

Mi. xvii. 005. Stucco relief head, life-size. Hair has been in large locks, but these all broken away. Face broad, with smooth forehead; eyes slightly oblique and rather prominent, wide open, with well-defined lids and hollows for pupils; eyeballs blue. Nose very thin with small nostrils, mouth full and very short, with dimples at corners. Face well-modelled but not very expressive. Elongated lobes of ears broken, and face deeply cracked. Chin to crown *c.* 9". Pl. CXXXI.

Mi. xvii. 006. Stucco relief fr.; finial (to vesica ?). Leaf-shaped; from base separate two fronds composed of three branching spirals. Background of small rosettes. $5\frac{1}{2}'' \times 4\frac{7}{8}''$. Pl. CXXXVII.

Mi. xvii. 007. Stucco relief fr. Gorgon shield; see *Mi. xi. 00109. Plentiful traces of paint baked to colour of terra-cotta. Diam. $4\frac{3}{4}''$.

Mi. xviii. 001. Stucco relief pedestal (half of) for large fig.; when complete circular in cross-section, decorated in front with floral painted design also in relief. In centre of this a narrow-mouthed large-bodied vase, white spotted with rings of dark red, standing on top of broad leaf whose top curls forward into a volute. Leaf veined and painted inside brownish black and buff, on outside red and white. From mouth of vase rises broad triple leaf, whose central tip curls forward like that of the leaf below; and from either side of it spring shorter fronds in copper-green or black, curling or straight.

From behind this central orn. spring outwards next on either side five flowers, red and white, or dark red and purple, one above the other, seen in profile. Beyond them again four acanthus leaves on either side spread horizontally. Between their tips appear detached curling fronds of copper-green; along edges, half-flowers of red and white. Acanthus leaves alternately copper-green and black, with yellow central vein and curling-over edge of red and white; background throughout dark red. Colouring excellently preserved. Material, soft clay mixed with fibre. H. 14"; extreme depth of arc 5", base of arc 16". Pl. CXXXVIII, and Figs. 289–90.

Mi. xviii. 002. Stucco relief fig. Folded R. leg, from middle of thigh to ankle, of life-size Bodhisattva seated cross-legged, covered with gaily coloured and ornamented drapery. The robe proper of bright crimson orn. with free floral pattern of blossoms, leaves, and trailing stems in buff, blue, green, white, and maroon. Over knee a round patch of pale blue, also orn. with a wreath of leaves in buff; a little below an appliqué chain of beads with occasional flower orn. crosses the leg.

Edge of robe seen unbroken, forming a horizontal line above the place where feet crossed (broken away), and turning down at right angles across ankle. It consists of an outer border of maroon and slate-blue stripes separated and bounded by lines of white, and an inner zigzag wreath of green leaves painted on crimson of robe and bounded on inner side by narrow lines of green and yellow. The triangles formed by zigzag are filled by small yellow flowers. Inner side of robe, as seen round opening for feet, is a brilliant copper-green; some folds of same colour are seen above thigh, sweeping down upon it from the centre of the fig. and perhaps forming part of the draped girdle.

Of girdle-knot one loop remains (maroon and blue), and one long end which trails from loop over upper surface of thigh and disappears behind knee. This end divided by longitudinal grooves into three long folds; that along the upper side painted maroon, the other two pale slate-blue, covered with a feather-like leaf orn. in deep yellow, green, and red outlined with white.

Colours all well preserved. Material, soft clay mixed with straw, and with straw core projecting at thigh end and ankle. Length 15", H. $9\frac{1}{2}''$, thickness *c.* $9\frac{1}{2}''$. Pl. CXXXVIII (showing upper surface).

Mi. xviii. 003. Stucco fr. in round. R. arm, life-size, of Lokapāla in armour, bent at right angles from elbow. At upper end is a shoulder-piece (prob. of leather), representing a monster's head with open jaws through which arm comes. The monster has globular protruding eyes (white and black in red sockets), flat ape-like nose, and huge mouth with curved-back lips showing row of formidable teeth (white with red interstices). Face was painted yellow with black lines outlining lips, eyebrows, etc., but paint almost all lost. Beneath this hang a short sleeve of pink drapery and an inner sleeve of copper-green, covering arm to elbow. Forearm clad in close-fitting guard of cobalt-blue with maroon binding and wrist-band, and scalloped border of copper-green over hand. Only a fr. of latter remains, painted pink; paint of drapery and guard much destroyed. The dress was evidently that of the Lokapālas in the Ch'ien-fo-tung silk paintings; see *Ch. 0010, *General Note*. Material, soft clay with straw core. Shoulder to point of elbow $11\frac{1}{2}''$, elbow to wrist 11". Pl. CXXXVIII.

Mi. xviii. 004. Stucco fr. in round. L. hand nearly life-size; wears ring bracelet and holds Vajra (?) or cup. Slender stem with ring at each end; above, small shallow cup, below a solid base with lotus-petalled orn. Hand painted white, with red lines between fingers; but paint mostly lost. H. $7\frac{5}{8}''$; across knuckles $2\frac{1}{2}''$. Pl. CXXXVII.

Mi. xviii. 005. Stucco relief fr. of R. hand. In palm, applied to fingers and perhaps held by missing thumb is relief medallion of seated Buddha. Vesica blue; flame border white with scrolls in dark red; nimbus pale green; lotus-throne blue; robe once apparently vermilion, now brown-red; eyes and hair black, complexion yellow. L. knee gone.

Hand white with creases in palm marked by vermilion line; was held palm outwards and bent to L. at angle of *c.* 45°, to bring Buddha fig. into perpendicular. Material,

and having white centres, the border making an acute angle in L. corner.

Lower half shows to R. a censer with flattened dome-like top, from which rises the smoke mentioned above. Below, the censer has a broad overhanging shoulder from which hang bells, and a goblet-shaped body with tapering stem which swells out again to lotus foot; all is white with details of orn. in black. R. and L. of censer stands a scaly yellow dragon, striding, with one hind claw touching lotus base. Their serpentine necks entwine in elaborate knot in front of censer, and passing behind it take a graceful curve downward and outward on opposite sides of censer, recurving so as to bring their heads facing on opposite sides of censer-top. Their forelegs rest on its shoulder, and their claws are pressed against the dome; their tails intertwine with each other's necks.

On L. kneel man and woman (donors) on mat in prayer. The man is swarthy, with black hair and beard, white dome-shaped cap with upturned brim, aquiline nose, straight eyes, long belted robe of dark chocolate with white cinquefoil spot pattern; his general appearance non-Mongolian. The woman is fair-skinned, with black hair dressed high, but broad and flat on top; cap like button mushroom; simple ear-ring, and straight eyes. Her robe, red powdered with blue and grey rosettes, is straight and simple, without girdle, and small at wrists. In her hands she holds a long-stemmed flower, pink and green.

Behind her stands with uplifted arms a fig. like a naked infant, painted dark chocolate. Its hair is shaven, leaving circular patch on R. side, and straight fringe in front. Beyond the man a smaller and similar fig. dancing, and drawn with great animation. Its R. hand is upraised grasping a bunch of berries, its L. stretched downwards; near it are two circular objects in white.

On ground in front of man is small brazier (?). Apparently suspended on tail or wing of dragon is pair of balances; and higher up appears a bag, prob. signifying money offering. The background is light blue, with nine short lines of Uigur (not read) placed in convenient spaces between figs. and above their heads.

Painting rather hasty and surface much abraded. Subject unidentified. 2′ 3″ × 1′ 7½″. Pl. CXXVI.

Mi. xx. 001. Fr. of Turkish 'Runic' (?) MS., on coarse light buff paper. Incomplete on all edges; writing very pale. *Obv.* remains of *c.* 12 ll. (fragmentary). *Rev.* blank. From south-east corner of Stūpa. 7″ × 5¼″.

Mi. xx. 002 (marked wrongly xvii. 0010). **Carved wooden capital;** Indo-Corinthian square abacus above round shaft; capital cut in square. From middle of sides rise two bound stems, dividing above tie. Each curves towards angle, and opens in half-leaf of acanthus type. Seen from side presents two half-leaves; from angle, complete acanthus leaf with two stalks. Mortice cut through from top to bottom, of 2½″ diam. Capital 4½″ sq. × 5″. Pl. CXXVIII.

Mi. xx. 008 (marked wrongly xvii. 008). **a–b. Two frs. of copper plate,** each having two bands of orn. in relief; design of zigzag line making between borders alternate triangles filled with lines and rows of dots parallel to alternate branches of zigzag. Orn. made by pressing metal into matrice with intaglio design. 3″ and 3⅛″ × 1$\frac{13}{16}$″.

Mi. xxi. 001. Fr. of carved wood; strip off edge of panel carved in relief, with continuous scroll throwing off double spiral tendrils on each side alternately. Plain border ⅞″ wide down one side. Traces of red paint. 1′ 2½″ × 2¾″ × ⅝″. Pl. XLVII.

Mi. xxi. 002. Octagonal wooden post tapering to point. Each of eight sides inscr. with line of Brāhmī. Much worm-eaten, and surface much destroyed. H. 2′ 5½″, gr. diam. 4″.

Mi. xxii. 001. Wooden cinerary box, roughly made, with sliding top, and holding small pieces of bones with tatters of thin gauze-like cloth. 15″ × 4″ × 4″.

Mi. xxiii. 1. Stucco relief fr. Architectural tile, sq., showing Bodhisattva head in relief in centre surrounded by circular halo and ring of large bead orn. Corners filled in with adapted volute orn., and plain ¾″ border all round. Face of conventional type, full, smooth, double-chinned; eyes long, narrow, and almost straight; mouth slightly upturned at corners; lobes of ears covered by large rosette ear-rings. Hair and orns. as in *Mi. xi. 00, type *a*, but top-knot wide and flat on top and side-rosettes slant upwards making whole coiffure much broader. The halo has a rayed outer edge. Material fine buff clay, lightly but evenly fired; surface treated with thin buff engobage or wash. For other frs. from same or almost similar mould, see Mi. i. 003; ii. 002; xi. 00121; xxiii. 2, 0014; and cf. from different moulds Mi. xvi. 001–17. 8¾″ × 9″. Pl. CXXIX.

Mi. xxiii. 2. a–d. Stucco relief frs. of architectural tile like preceding. *a*, *b*, and *d* join, making R. half of background; *c* is a disconnected corner. No part of Bodhisattva head preserved except rosette of L. ear. Mi. xxiii. 0014 is prob. fr. of remaining corner. *a*, *b*, *d* (joined) 8⅞″ × (gr width) 4¼″; *c*, 4″ × 3″.

Mi. xxiii. 001–7. Frs. of open-work wooden panel. Within a flat plain border an elaborate leaf and circle design based on quatrefoil rosette with ogee leaves springing from between petals. Prob. two panels of same design are represented. All edges of fretwork bevelled; rather rough, but effective work. Inside border 7¼″ sq.

Mi. xxiii. 008–9. Two carved wooden brackets, straight, projecting end carved in form of dragon-head. The monster has prominent eyes and broad upturned snout; his jaws open, showing double row of large sq. teeth. The neck is sq. in section and into each side and top are driven three pegs, all now broken off at surface. Surface of 008 much cracked, and part of lower jaw missing. 009 in good condition and showing remains of purple paint. Whole 7½″ × 2½″ × 2″; head 3″ × 1½″ × 2″: *009*, Pl. CXXVIII.

Mi. xxiii. 0010–11. Two carved wooden brackets;

cf. Mi. xxiii. 008–9. Sq. tenon 3" long with sq. vertical mortice-hole, separated (on sides only) from bracket proper by bevelled cavetto. Bracket has plain top; on sides, vertical border-beading beside cavetto; along top, sq. beading, with round beading below (total depth $\frac{15}{16}''$, continuing round front). Below this sides are recessed, and carved with half of arrow-head leaf (point towards tenon), beyond which in outer bottom corner is a circle within a quarter-round moulding. At end is: above, the continuation of the sq. moulding above a round moulding which runs along top of sides; below, the same repeated. On under-surface the half-leaves of the sides are completed, and separated by an angular moulding up the middle. For others of the same, see Mi. xxiii. 0016–18. $6\frac{3}{8}'' \times 1\frac{5}{8}'' \times 1\frac{5}{8}''$. *0011*, Pl. CXXVIII.

Mi. xxiii. 0012. Carved wooden upright (of panel frame?); in section, oblong with one back corner bevelled off. Two dowel-holes (one with dowel) pass through from side to side, at middle and one (broken) end respectively; and other end finishes in broken tenon. Front surface in two planes: the higher ($\frac{1}{4}''$ projection) forming the outer half, the lower the inner. The latter is orn. by a zigzag line running perpendicularly, the triangles it forms being ribbed with grooves parallel in alternate triangle to the alternate bends of zigzag; edge of upright is finished by a plain $\frac{1}{4}''$ border. The outer half has a plain $\frac{3}{8}''$ wide border on the opposite edge, and within, at top, the end prob. of a dragon orn. like that of Mi. v. 004. The fr. preserved shows perhaps a tail—a long form with one straight and one convex side, ending in a spiral, and with a nicked border along the curved side exactly like the manes in Mi. v. 003, 004. Below this is a straight stem running perpendicularly, with straight downward-pointing leaves going off on either side. $9\frac{1}{2}'' \times 2'' \times 1\frac{5}{8}''$. Pl. CXXVIII.

Mi. xxiii. 0013. Wooden staff with lathe-turned head. Staff, *c.* 1" sq. in section, is broken off at length of 5". Head, complete, *c.* $3\frac{1}{4}''$ in diam. at widest part, is 6" in length and consists of a drum bevelled inwards round upper edge to a ring-moulding; above, a sphere passing through another ring-moulding into a narrow circular neck, which expands again to a wide circular slightly convex top. Sand-encrusted all over; wood cracked and decayed. For object, cf. L.B. II. 002, etc. (above, p. 398); Mi. xxiii. 0019–22. H. of whole 11".

Mi. xxiii. 0014. Stucco relief fr. of tile containing Bodhisattva head, like Mi. xxiii. I. Prob. belonging to Mi. xxiii. 2. $1\frac{3}{4}'' \times 2\frac{11}{16}''$.

Mi. xxiii. 0015. Corner of wooden panel carved in relief with floral designs. Main bough crosses corner, and symmetrically curling tendrils fill it. Plain border top and side, and plain rectang. centre. For other frs. of the same, see Mi. xxiii. 0024–5. $6\frac{5}{8}'' \times 3\frac{7}{8}'' \times \frac{7}{16}''$. Pl. CXXVIII.

Mi. xxiii. 0016–18. Carved wooden brackets, as Mi. xxiii. 0010 (q. v.).

Mi. xxiii. 0019–22. Wooden staves with lathe-turned heads, like Mi. xxiii. 0013, but on smaller scale. The staff is cut in one with the head, and is broken off at length of *c.* 1" in 0019 and 0021; in 0020 and 0022 it has been cut separately and fitted into a sq. mortice in the bottom of the head. It is preserved in 0020 and is 3" long; but has been lost from 0022. Mouldings the same as in xxiii. 0013 on reduced scale, and with the addition of cube below in 0020. 0021 and 0022 are a pair. The surface of the top in all cases is rough, which agrees with the view as to the architectural use of these and similar staves found in L.B. II, IV; see above, p. 398. Remains of red paint on all except 0020.

0019. H. of whole $5\frac{3}{4}''$, gr. diam. $2\frac{1}{4}''$.
0020. " " " $7\frac{1}{2}''$, " " $1\frac{5}{8}''$.
0021, 0022. Height of whole 4" and $2\frac{7}{8}''$; gr. diam. $1\frac{5}{8}''$.

Mi. xxiii. 0023. Fr. of wooden relief carving; R. side of vesica and band of drapery, prob. of standing Buddha. Flame border shows traces of red paint. $7\frac{1}{4}'' \times 3'' \times \frac{1}{4}''$. Pl. XLVII.

Mi. xxiii. 0024–5. Two frs. of carved wood panels, evidently parts of Mi. xxiii. 0015. Traces of purple paint. $5\frac{1}{4}'' \times 1\frac{1}{2}''$ and $3'' \times 1\frac{1}{4}''$.

Mi. xxiii. 0026. Fr. of pottery vessel with rolled rim; hand-made of ill-levigated clay; hearth-burned. On shoulder, above two incised curves, Tibetan inscr. (incised before fixing) reading ཁོང་བཙན. $3'' \times 3\frac{1}{2}'' \times \frac{3}{8}''$. Pl. IV.

Mi. xxiv. 001. Stucco relief plaque, incomplete. Buddha seated in meditation on lotus; robe covering both shoulders and hands. Lotus (unopened) has three rows of petals. Plain circular vesica forming background, broken off on R. No colour. Clay, burnt. H. 6"; H. of fig. $3\frac{1}{2}''$. Pl. CXXXVII.

Mi. xxiv. 002. Fr. of painted wooden panel. Subject too fragmentary to explain itself. Work rough. $13'' \times 2\frac{7}{8}''$ to $2'' \times \frac{5}{8}''$ to $\frac{7}{8}''$.

Mi. xxv. 001–2. Frs. of carved wooden arch, as Mi. xv. 0029, but on smaller scale. Apparently only two Buddha types, one seated with closely fitting drapery, one with R. arm resting in fold of mantle, and inner robe crossing the chest diagonally from the L. shoulder. Figs. seem to have been painted in different colours; vesicas were blue-grey; haloes gilded, flame-border of vesica red. Broken and much decayed. 14" and $8\frac{3}{4}'' \times 3'' \times 1\frac{7}{8}''$ respectively. *002*, Pl. CXXVIII.

Mi. xxv. 003. Fr. of painted wooden panel. Two scrolled leaves in blue outlined black on red ground. Other details too abraded and fragmentary to recognize. Rough work. $13\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{3}{4}''$.

Mi. xxv. 004. Fr. of coarse linen (?) fabric; deep red, faded, plain weave. *C.* 10" sq.

Mi. xxv. 005. Iron staple formed by strip oblong in section, stout at middle and tapering almost to a point at

each end. This is bent round, pinched together, and the ends bent out. Thickness $\frac{5}{16}'' \times \frac{3}{16}''$ to $\frac{1}{8}'' \times \frac{1}{16}''$; point to point $3\frac{1}{2}''$, cross M. $2\frac{1}{2}''$.

Mi. xxv. 006. Iron disc, with two flat tongues. Slightly divergent; one pierced. Diam. $1\frac{1}{2}'' \times 1\frac{3}{8}''$; tongues $1\frac{1}{2}'' \times \frac{1}{4}'' \times \frac{1}{8}''$.

Mi. xxv. 007. String sandal, same make as M. Tagh. a. 0040 (q.v.). Toe and heel of sole missing, also large portion of uppers. Much encrusted with earth. Length of opening approx. $7''$; width of sole approx. $3\frac{1}{2}''$.

Mi. xxvi. 001 (marked wrongly Mi. 001). **Stucco relief head.** Face mask of fig. like Mi. xi. 005, etc. Eight straight locks close together in fringe on forehead. Face young, full; eyes straight. Soft clay mixed with grass fibre. H. $2''$.

Mi. xxvi. 002 (marked wrongly Mi. 002). **Stucco relief fig.**; one of series of small male figs. Face rather flat, oval, and childish, eyes almost closed, mouth straight and dimpled. Two locks of hair descend from crown to forehead and are then parted, turning up in two crescents; rest of head bald. Body to hips nude; orns.—ear-rosettes, plain necklace, jewel-bands crossed on breast and held by rosette. Arms are either held out from body about at right angles with one another (xi. 0085) or are raised above head (xi. 0069). Plain loin-cloth (xi. 0085). Body from waist down bent violently sideways as if in flight; and mantle, descending from behind head to hips, held out by arms and forming background to body; but all figs. broken at waist and mantle close round body except in case of Mi. xi. 0085. For figs. from same or similar mould, all moulded solid, see Mi. x. 0011; xi. 0068–9, 0085; cf. also Mi. x. 0012; xii. 003. For head only, Mi. xi. 0067.

002. L. side of head, arms from shoulders, and all below waist missing. Fr. of mantle remains over R. shoulder. Smoke-blackened and surface damaged. H. $3\frac{7}{8}''$.

Mi. xxvi. 003 (marked wrongly Mi. 003). **Stucco relief fr.** of drapery (?). $1'' \times \frac{3}{4}''$.

Mi. xxvi. 004 (marked wrongly Mi. 004). **Stucco relief head.** Hair brushed up from forehead and ears in small independent curls, almost hiding twisted cloth diadem from which rises a top-knot of similar small upright curls. Traces of red and black paint on face and hair. Forehead smooth, but brows contracted over widely opened eyes with round prominent eyeballs. Mouth long and straight, showing upper teeth, which bite on lower lip making long-drawn creases to chin. Large ears sharply pointed; angular dimples in cheeks. Grotesquely fierce effect. Chin to crown $2\frac{3}{4}''$. Pl. CXXXII.

Mi. xxvi. 005 (marked wrongly Mi. 005). **Stucco relief fr.** Hair (or drapery ?) possibly from R. side of head of large fig., but hair unlike that of any other example; whorl over middle of forehead, side folds as of drapery, but running both up and down. Edge of forehead marked by red line; forehead gilded. *C.* $7'' \times 7''$.

Mi. xxvi. 006 (marked wrongly Mi. 006). **Stucco relief fr.** Lotus-flower with centre exposed and petals all pointing upwards (under ones being bent to R. and L.). Central rosette has five petals and five sepals; outer ray nine-pointed petals. Attached behind to horizontal bar of stucco with a smooth top, and marks of reed core at L. back. For others, see Mi. x. 0026; xi. 00124; xv. 0021–8. H. $4\frac{1}{4}''$. Pl. CXXXVI.

Mi. xxvi. 007. a–b (marked wrongly Mi. 007. a–b). **Stucco relief frs.,** probably from surface of a large fig. Traces of gold-leaf; *b* shows folds of drapery. Much damaged. Soft clay mixed with grass fibre. *a*, *c.* $5'' \times 4''$; *b*, *c.* $2\frac{3}{4}'' \times 1\frac{3}{4}''$.

Mi. xxvi. 008 (marked wrongly Mi. 008). **Stucco relief.** Wreath, made of thin core of four grass stalks tied round with grass of fibre and plastered with usual fibre-stucco, so as to have one flat side. To this are applied flowers in stucco; five painted crimson, one green, two yellow, one blue. There are four shapes, three showing centre of flower, which has four petals and is either circular, oval, or an irregular quadrilateral. The fourth, of which there are two examples, shows three petals in profile.

In two places core is pierced by dowel-pin for attachment. About seven flowers missing. $1'\ 7\frac{1}{4}'' \times 1\frac{3}{8}''$. Pl. CXXXVII.

Mi. xxvi. 009 (marked wrongly Mi. 009). **Part of stucco band.** On one side flat, on the other curved. Curved side painted green. Flat side has plain flat white moulding down each edge and recurrent flower orn. on black ground decorates space between. Flowers black and white, followed by crimson and white, then green and black, then yellow and crimson. First, third, and fourth have, respectively, yellow and crimson, crimson and white, and black and white centres. Stalks, alternately yellow and green, support them. Wooden core; soft clay mixed with grass unburnt. Actual length $1'\ 4''$. Length with projecting core $1'\ 8''$; width $2''$; thickness $\frac{7}{8}''$. Pl. CXXXVII.

Mi. xxvi. 0010 (marked wrongly Mi. 0010). **Stucco relief fr.** Little finger of R. hand, natural size with iron core, which corroding has split the stucco. Gilded all over and burnt. On outside, peculiar projecting fold. Length $3''$.

Mi. Cave A. Rectang. slab of plaster stucco, inscr. with six lines of Uigur in black ink. Cut from image platform within cave A, north-west of 'Ming-oi' Site. $9\frac{3}{4}'' \times 6\frac{1}{4}'' \times \frac{1}{2}''$.

Section V.—THE KHŌRA SITE AND THE DEFILE OF THE IRON GATE

March up Khaidu-gol valley.

After the trying conditions of work undergone by us all at 'Ming-oi' I felt glad when the completion of the tasks I had set myself allowed me on December 23 to send off my heavy convoy of antiques to Korla and to start myself with an adequate band of labourers for the site of Khōra. Inquiries begun at Kara-shahr had led to information being elicited with much trouble from reticent Mongol shepherds about Buddhist ruins situated at the north foot of the range which separates the plains west of Korla from the wide valley of the Khaidu-gol. They had so far remained unnoticed by European travellers. The first march lay through a snowy landscape and led north past straggling narrow belts of cultivation. Their poorly tilled fields belong to semi-nomadic Mongols, and from Shikchin onwards derive irrigation from a canal following a wide depression which seems to mark an ancient branching bed of the Khaidu-gol.

Cultivation below Khōra site.

From Nōgai-bakche, the last hamlet, we turned to the west, and after a short march, ascending mainly over a bare stony 'Sai', reached the ruins perched on steep little ridges at the very foot of the range (Fig. 297). Immediately below them there lies, as the site plan (Plate 54) shows, a tiny patch of cultivation. It is irrigated from some springs, found then hard frozen, which rise some six hundred yards to the south at the mouth of a small valley. From about two miles before reaching the site, the coarse gravel and stones of the 'Sai' give way to a scrub-covered clayey steppe where I came upon traces of recent cultivation. This, I found out subsequently, is carried on intermittently by Mongols in years when a specially plentiful snow- or rain-fall on the mountains provides spring floods from the otherwise dry ravines descending near the ruined site. The fact that cultivation, even occasional, is possible under such conditions aptly illustrates what has been said above about the moister climate of the Kara-shahr valley.

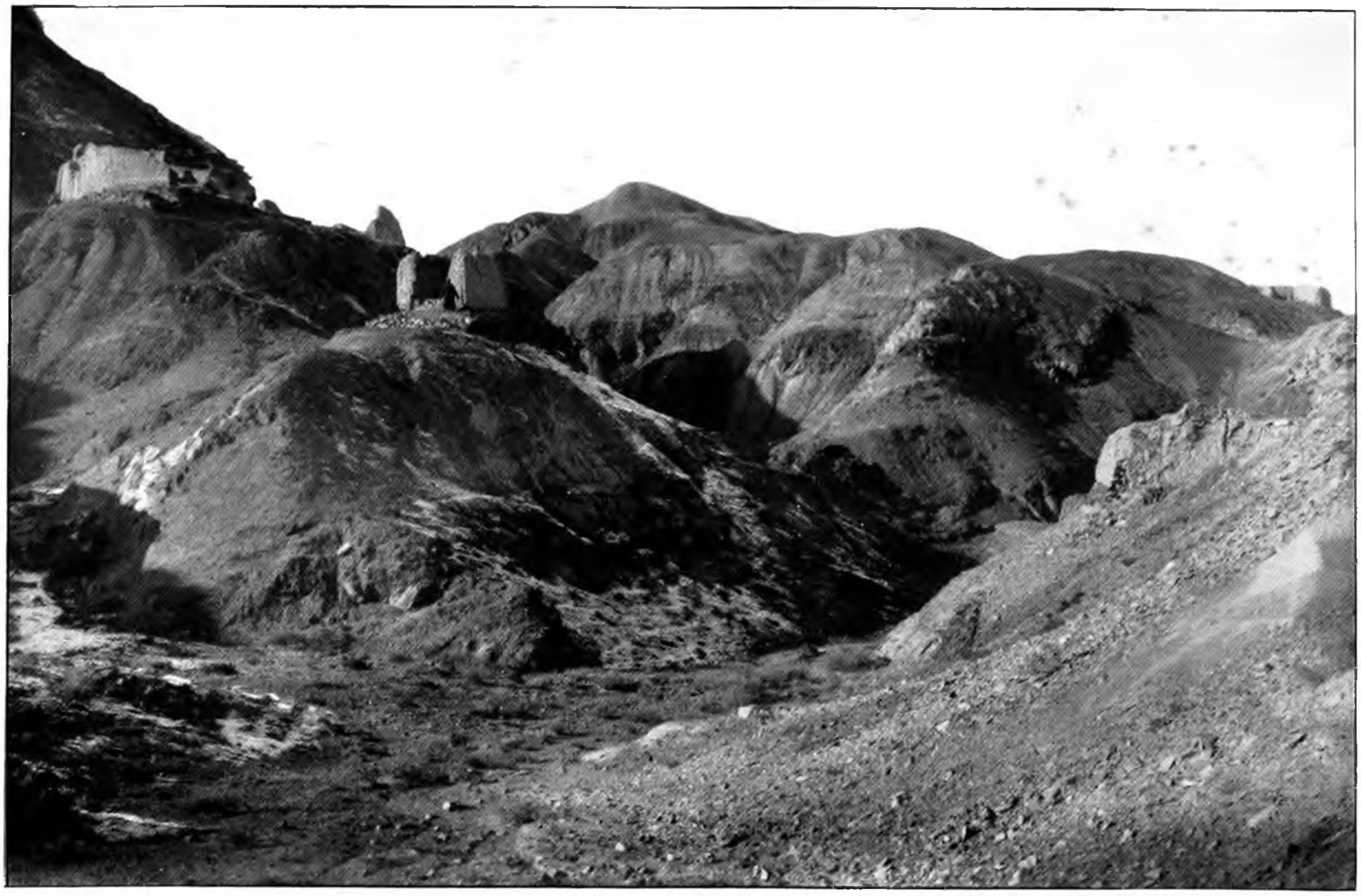
Structures of group I.

The ruins proved to be those of small Buddhist shrines scattered in groups over low but steep ridges which water-erosion has carved out of the rugged edge of a plateau. The photographs in Fig. 297, 299–300 will help to illustrate their position, which strongly recalled to my mind that of many a ruin of Buddhist times visited in the far-off valleys of Swāt and Bunēr. The group nearest to the patch of permanent cultivation above mentioned is marked I in the site plan, Plate 54, and seen on the left in Fig. 300. It comprises a number of cellas, mostly quite small, ranged to the north-west and south-east of a central structure conspicuous in Figs. 297 and 300. This consists of a solid masonry base, 9 feet square, bearing at a height of about 12 feet from the ground four niches which once must have been occupied by stucco images completely destroyed. On the top, about 23 feet from the ground, the extant masonry shows the commencement of a circular drum or dome. The base of the structure contains a small chamber, 7 by $4\frac{1}{2}$ feet, open to the south-east. Three fragments of Brāhmī Pōthī leaves, which one of my Turkī followers, sent to reconnoitre the site, had obtained from the solitary old Mongol settled here for some years and cultivating the fields, were said to have been found in this little chamber. The same was stated about the small stucco relief of a seated Buddha, Khora. 002.

Cellas of group II.

A cella, I. i, 10 by 7 feet, occupying the crest of the ridge to the north-west of this structure, had its brick walls broken from a height of about 2 feet. Its excavation yielded only a number of turned wooden balusters and finials which may have belonged to miniature Stūpas. Similar pieces were among the débris cleared on the west slope below (Khora. 001–4). In another small cella, I. ii, measuring 9 by $8\frac{1}{2}$ feet, which was deeply filled with débris, there was found the small wooden relief statuette of a Buddha seated in meditation, Khora. I. ii. 001 (Plate XLVII). Of the fresco decoration of the walls only a band of small standing Bodhisattvas could be faintly made out at a height of about 3 feet from the floor, and their faces, too, seemed to have been purposely effaced.

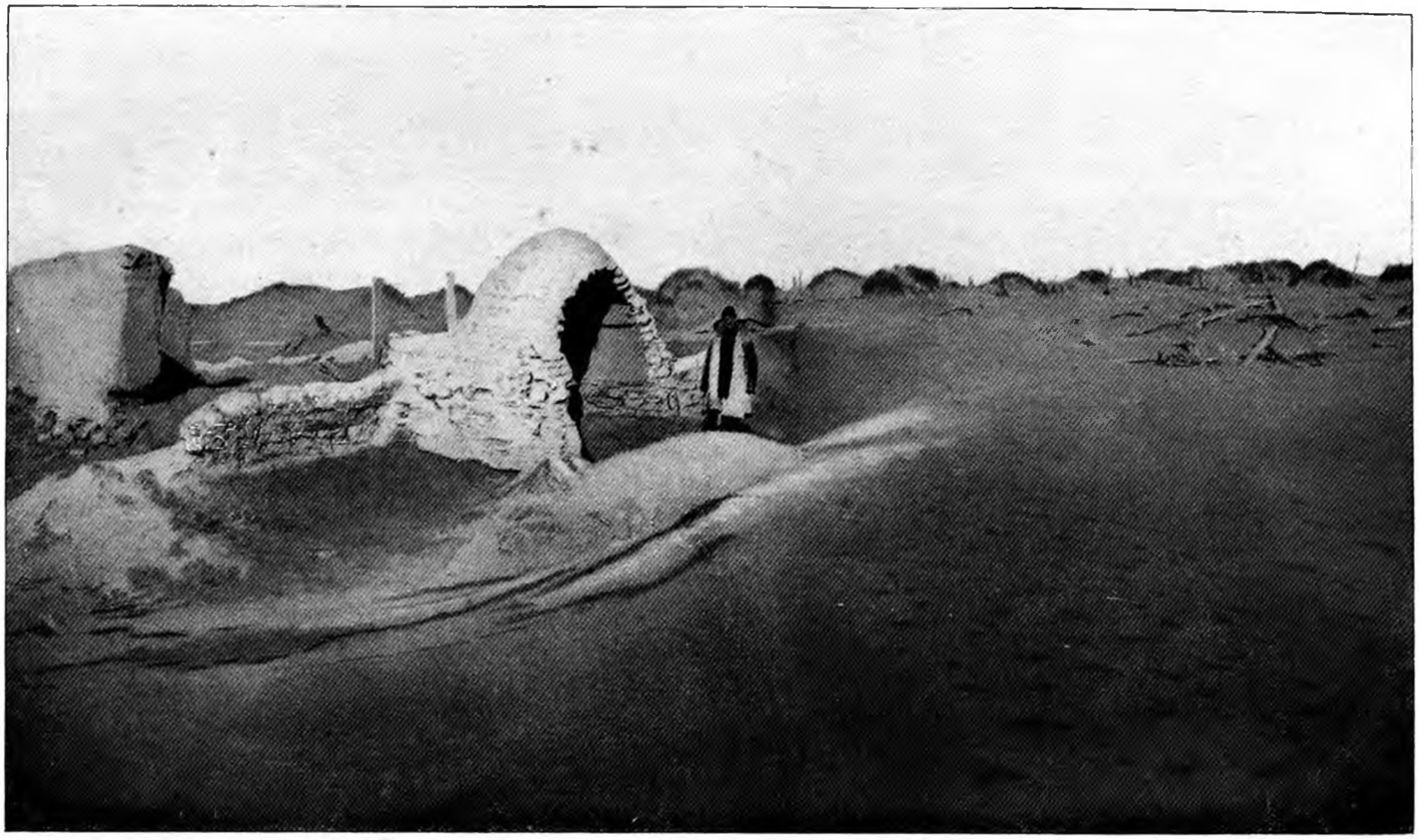
IV III



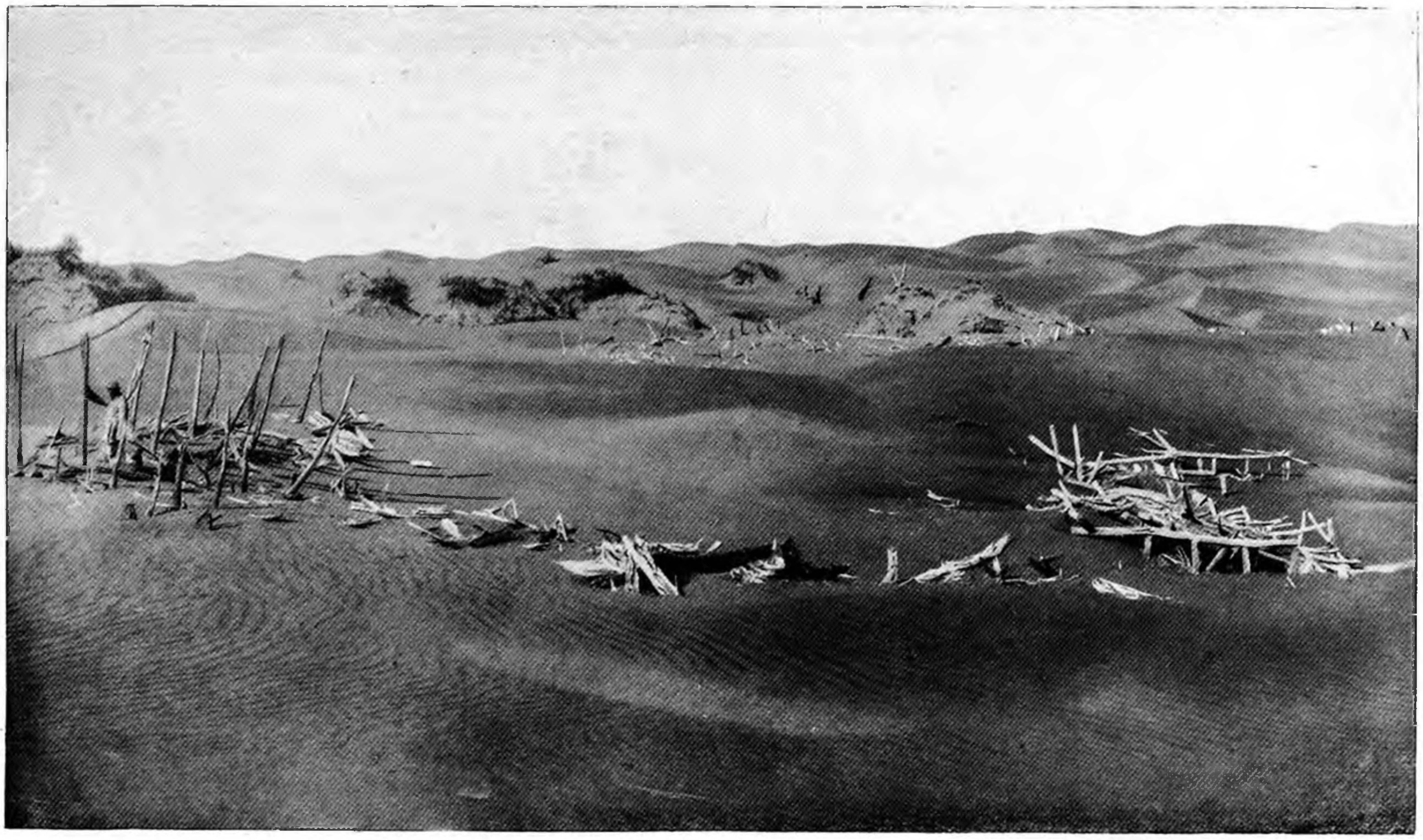
299. RUINED SHRINES OF GROUPS III AND IV, KHŌRA SITE, SEEN FROM SOUTH.

I IV II

300. RUINED BUDDHIST SHRINES, KHORA, SEEN FROM EAST. RUINS OF GROUPS I, II IN FOREGROUND.



301. RUINED ENCLOSURE OF MUHAMMADAN CEMETERY AT GUMBAZ, NEAR INCHIKE RIVER.



302. RUINED QUADRANGLE OF KARA-DONG SITE, SEEN FROM NEAR SOUTH-WEST CORNER.

To the south-east of the central structure and beyond a small open court lies a larger room, about 19½ feet by 18½, which decayed bricks and refuse filled to a height of over 4 feet. Here, too, only faint traces remained of the wall decoration, apparently a diaper of small Buddhas. All refuse showed the effects of plentiful moisture.

Ruins of groups II, III.

The second group, seen in Fig. 300 on the right, occupies a tiny ridge to the north and below the ruins just described. It consists of a row of three adjoining cellas, forming together a block 70 feet long and 27 feet deep. Apart from a few small appliqué relievo fragments in stucco their clearing brought to light only the much-decayed head of a statuette carved in wood (Khora. II. i. 001, Plate XIV). To the east of group II there rises on a low isolated terrace a platform about 30 yards long and 20 feet broad at its top, built up of uncut stones to a height of about 18 feet. A shapeless tower-like mass of brickwork which stands at its eastern end was not recognizable in its character. A knoll of the steep rocky spur leading up to the main group of ruins (Fig. 299) bears an isolated cella, III, 9 feet square within, solidly built on a walled-up platform with sun-dried bricks measuring 15″ × 8″ × 4″. It was cleared without any finds being made.

Remains of carved and painted wood.

On a narrow shoulder of the spur just referred to, and at a height of about 150 feet above the level of the fields, is built the group of ruined shrines marked IV and shown in the inset plan of Plate 54. The small plateau has been enlarged by a stone-built terrace facing north and thus made to afford space for a series of shrines, all built against the rocky slope rising behind. Rain-water descending from the latter has badly effaced all the structures. The easternmost of them is the isolated cella IV. i, measuring 11 feet by 10½ within. In the débris of the small anteroom that gives access to it a number of interesting remains of carved and painted wood were unearthed, unfortunately all showing the destruction caused here by fire first and then by moisture. The small wooden block, Khora. IV. i. 001 (Plate XLVII), shows in sunk carving a kneeling figure with hands clasped in adoration. The wooden base for a statuette, Khora. IV. i. 004, is adorned with elegant carving along its edges. The large fragment of a painted wooden beam, Khora. IV. i. 003, though charred on the back and otherwise damaged, still displays the figures of three divinities within circular vesicas. But the damage suffered must be regretted most in the case of the carved and painted cornice, Khora. IV. i. 002. Its surviving portion, which measures 1′ 9″ by 1′, shows two groups each containing a Buddha surrounded by divine worshippers, all painted in rich colours and gold. The whole work is very fine in design and delicately finished, but has too badly darkened to permit reproduction. Certain features suggest encaustic technique executed over gilt ground, but the injured condition of the surface makes determination of this difficult without chemical testing. The cornice was decorated along its bottom edge by a row of grotesque relief busts curiously reminiscent of Gothic monsters. Two of these appliqué carvings were recovered detached (Plate XLVII).

Living quarters in group IV.

A larger shrine to the west of IV. i with a vaulted passage at the back of the cella had suffered much by water penetrating from the slope behind, and retained no recognizable remains of its original decoration. The same was the case with a cella adjoining it on the west. But in one of two small rooms at the end of the terrace which, judging from the remains of a fireplace, had evidently served as living quarters for monks, there were found the painted wooden panel, Khora. IV. ii. 002, showing a lotus floating on water between two water-fowls, and a cup-like object of turned wood, Khora. IV. ii. 001.

Ruined Stūpa mound.

With the clearing of group IV the series of ruins offering scope for excavation was completed. But brief notes have still to be added on some other remains of the site. At a distance of about 600 yards to the north of group I a roughly hemispherical mound, rising on fairly level ground with traces of old irrigation terraces, attracted attention. It proved to be a ruined Stūpa measuring about 38 feet in diameter, and retaining in its much-injured state a height of about 17 feet above the field level. A cutting which had been made into it from the south, evidently long ago, had laid the

interior bare to the centre and showed it to be constructed throughout of bricks, 15″ × 8″ × 4″, the same size as noted elsewhere at the site. A low, flat mound about 25 yards to the south of the Stūpa showed no traces of structural remains, but may mark a position once occupied by less solidly built dwellings.

Remains of defensive position.

Less than half a mile to the west of this ruined Stūpa, and about the same distance from the main ruins, the top of a very steep and almost completely isolated rocky spur (v in plan, Plate 54) shows clear signs of having once been occupied as a place of safety. The crest of the spur has been artificially enlarged here by terrace walls, partly in uncut stone and partly in brickwork, to a level space measuring about 105 feet from north to south and about 66 feet across. It is thickly covered with potsherds of ancient appearance, but bears no structural remains. A small bastion-like projection to the north seems intended to defend the only side from which the top of the spur can be approached without difficult climbing. On all other sides it is cut off from neighbouring ridges by very steep rocky ravines. A small knoll on the slope to the north, on a level about 60 feet lower down, is occupied by a badly decayed mound which may be the remains of a Stūpa. It evidently was taken for one by those who long ago made a cutting reaching to its centre. One side of what looked like a square base measured about 33 feet. The cutting showed the mound to be constructed partly of sun-dried bricks and partly of uncut stones. Its present height is about 15 feet above the natural rock of the knoll top.

Former agricultural settlement.

No coins or other datable relics were found at the site. But judging from the structural and other remains, the conclusion seems justified that its shrines continued to receive worship as long as those of 'Ming-oi', and that they suffered destruction about the same time as the latter. It is not likely that a monastic establishment could have existed here without some larger agricultural settlement in its vicinity. For this the clayey steppe to the east and north might have afforded ample room, provided that in Buddhist times the water-supply from the mountains was more abundant and regular than it now is. Desiccation thus seems to have played its part here too. We left the picturesque site with regret, after our stay over Christmas Day had sufficed for clearing its ruins and for R. B. Lāl Singh's survey work on the watershed of the range to the south ; for in spite of the greater elevation and the vicinity of the snow-capped mountains there was warmth in the air and clear sunshine, doubly welcome after the Sarmatian winter days we had spent in the Kara-shahr plain.

Skirting the foot of the range where scrub and jungle-tree growth were abundant at the mouth of all ravines, we reached the snow-covered plain at Shikchin by the evening of December 26.

Ancient watch-tower south of *Shikchin*.

On the following day a long march over interesting ground brought us to the Korla oasis. After crossing for close on seven miles the low ridges and terraces into which the range coming from Khōra breaks up at its easternmost foot, the track led past a massive ruined watch-tower placed on a high and commanding terrace. It is the one to which I have had occasion, on p. 1199, to refer in connexion with the ancient tower above the caves of 'Ming-oi'. It is built very solidly, about 32 feet square at the base, and still rises to a height of about 19 feet. It is constructed throughout of well-made sun-dried bricks measuring 12″ × 8″ × 3-4″. The decay it has suffered in spite of its massive construction would alone attest its antiquity. But what attracted my attention at once were the regular layers of reeds inserted between the brickwork. At places where big fissures had formed in the latter I could clearly see that, while in the interior masonry the reed-layer appeared after every single course of bricks, a plainly distinguishable outer casing of brickwork, about 4 feet thick, showed it regularly after every three courses. This latter arrangement is usually found in the brick-built watch-towers of the Tun-huang Limes.

The similarity to these which the ruin showed in position, general appearance, and that

significant detail of construction with reed-layers was so great as to remind me at once of the fact that Dr. Hedin on his journey of 1896 to the terminal Tārīm had found an obviously ancient route line leading from Korla to Ying-p'an, where the dried-up bed of the Kuruk-daryā branches off towards Lou-lan, marked by a series of big watch-towers.[1] His description of them strongly supported the belief that this line of towers dated back to the period when the ancient Chinese route from Tun-huang to Lou-lan and thence to the northern oases of the Tārīm Basin was first opened. The careful survey of them which I was able to make in the spring of 1915 on my way from the Kuruk-daryā to Korla has fully confirmed this belief. It has furnished conclusive evidence that these towers served as watch and signal stations along the road which connected Lou-lan with the Chinese administrative posts and military colonies established under the Emperor Wu-ti in the oases dotting the southern foot of T'ien-shan.[2] Early Chinese route from Lou-lan to Korla.

The chief, if not the sole, danger which threatened the safety of this great military and trade route came, as the account of the Former Han Annals shows, from irruptions of the Hsiung-nu, or Huns.[3] For these, as we have seen, the open Kara-shahr valley, with its easy approaches from Yulduz and other great grazing grounds north, must have at all times been the main gate. Experience gained during centuries on their far-flung northern borders must have proved to the Chinese commanders that the best safeguard against such attacks and raids lay in securing quick warning which would allow of timely preparation for defence. Korla and the adjacent parts of the route lay certainly nearest to the ground whence the danger of incursions threatened, and if they were to be adequately protected, a line of signal-stations pushed out to the north-east into the Kara-shahr valley would certainly suggest itself. Danger of irruptions from Kara-shahr valley.

It is for this purpose, I believe, that the ruined watch-towers along the foot of the Khōra range are likely to have been originally constructed. At what time exactly this extension beyond Korla of the line of signal-stations took place it is impossible to determine. But it is worth noting that I found the same enlargement by an outer casing of masonry, which is so clearly marked in the case of the tower just described, also at several of the towers between Ying-p'an and Korla. The dimensions of the tower south-west of Ming-oi before this enlargement, viz. about 24 feet square at the base, are found again at stations along the Tun-huang Limes. So, too, is the method of placing layers of reeds after every three courses of bricks. Hence it appears to me very probable that the subsequent enlargement of the tower was also effected during Former Han times. Its purpose, as my observations of 1915 have suggested, was probably not so much repair or strengthening as to raise the height of the structure for making its fire-signals better visible from a great distance. In this connexion I must record my regret that neither on my rapid passage during the closing days of 1907 nor during my equally busy stay at Korla in April, 1915, could I spare time to search systematically for the remains of towers which would have served to link up the tower south-west of 'Ming-oi' with the northernmost surveyed south-east of Korla. The intervening distance is about 27 miles, and owing to the configuration of the ground, with the westernmost hill chain of the Kuruk-tāgh commanding the plains on either side, two or three signal-stations between, even without conspicuous towers, would have been amply sufficient for effecting semaphoric connexion between the two points. Signal-stations along Khōra range.

The remainder of the ground crossed on that march to Korla offered also antiquarian and geographical interest. Within a mile or so from the tower the area of low, broken ridges was left behind, and after another five miles across a stony glacis we approached the deep bed in which the Defile on road to Korla.

[1] Cf. Hedin, *Reisen in Z.-A.*, pp. 75 sq.

[2] See *Geogr. Journal*, xlviii. pp. 208 sq.

[3] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. pp. 95 sqq., where the reasons advanced in 90 B.C. for planting military colonies west and south-west of Korla are set forth at length.

river draining the Baghrash Lake has cut its way between the westernmost spurs of the Kuruk-tāgh and the foot of the high, rugged range north of Korla. The river, from the place where it emerges from under the ice sheet of the frozen lake, flows rapidly in its winding course towards the steadily narrowing defile, with a great volume of limpid green water. This river defile is passed by the road connecting Kara-shahr with the plains of the Tārīm Basin, and must have been from the earliest times a point of great military importance. Its entrance is marked by the unpretending mud fort of Bāsh-eghin (Map No. 49. B. 1), which Yāqūb Bēg erected when awaiting at Korla the attack of the reconquering Chinese army from the side of Hāmi and Turfān. The total length of the defile from this place down to the last cross spur near Shōr-tokai, where the great plain is first sighted, is about seven miles by road. Throughout, the river twists and bends between low rocky spurs projecting from either side. Where these spurs on the right bank are not too precipitous, the road keeps close to the river; it has been practicable for carts as far back as local tradition goes. At other points, where the river gorge becomes wholly impracticable, the road ascends and descends steep ridges. One of the narrowest and most picturesque points in the defile is near Kalka, a tiny patch of cultivation on the left bank, with a much-frequented place of pilgrimage known as Alpataka-mazār. Here a wooden gate across the road, with troglodyte quarters for a guard, marks a watch-station still in being.

Defile of 'Iron Gate'.

There can be no doubt that the defile here briefly described corresponds to the 'Defile of the Iron Gate' 鐵門關 (*t'ieh-mên kuan*), which an itinerary of the T'ang Annals mentions as situated 50 li to the west of Yen-ch'i.[4] It must at all times have been a position favourable for defence and ambushes, and as such it figures in the account given by the *Chin shu* of a Chinese expedition which in A.D. 345 advanced from Yen-ch'i towards Wei-li, or the region below Korla.[5] There we also find the name *Chê liu* 遮留 recorded as that of the valley. The name, by the significance of its meaning in Chinese, viz. 'the intercepting', is said to have saved the commander of the Chinese force from falling into an ambush there prepared for him by the ruler of Kuchā.

From the last spur overlooking the debouchure of the river the view ranged unbroken across the wide expanse of the Korla oasis and beyond to the unlimited horizon of the great desert plains veiled in the yellow haze of the evening. It was a satisfaction to feel that I had returned once more to the Tārīm Basin and to the north-eastern corner of my old field of work, the 'sand ocean'.

OBJECTS EXCAVATED AT KHŌRA SITE

Khora. 001. Large finial of turned wood. Plan, a circular drum below, and flattened sphere above; the two separated by chamfered moulding (which projects upwards, not down). On top of sphere, a small torus from which rises circular neck spreading out to head shaped like inverted bowl. Drum and sphere orn. with incised reelings. No dowel-hole or tenon. Wood hard but split. H. 9¾", diam. of base 5⅛".

Khora. 002. Stucco relief fr. of seated Buddha. Hands in lap; head gone and most of vesica. Throne of five plain horizontal tiers; the two lower diminishing in size, the three upper increasing so that each projects over the last. The whole apparently painted red over white slip, of which plentiful traces remain. Soft buff clay. 3¼" × 3¼".

Khora. 003. Finial of turned wood, with tenon projecting from lower unsmoothed end. Plan, a circular base with diminishing top, supporting flattened ball, from which rises circular neck spreading out to flat disc-shaped head. Ball separated from base and neck by plain ring-mouldings. Whole retains plentiful traces of colour over white slip, black on head and ball, green on neck and upper part of base, red on base itself and ring-mouldings. H. 3⅝", diam. of base 2".

Khora. 004. Tapering wooden staff with knob at top;

[4] Cf. Chavannes, *Turcs occid.*, pp. 7, 304. The distance agrees closely enough with the fifteen miles or so from Bāsh-eghin to Baghdād-shahri, where the capital of Yen-ch'i in T'ang times may safely be located; see above, pp. 1182 sq. M. Chavannes points out that the 'Defile of the Iron Gate' is marked in one of the Chinese stone-engraved maps of A.D. 1137 at Hsi-an-fu; see *B.É.F.E.O.*, iii. p. 214, Map *A*.

[5] Cf. Chavannes, *Ancient Khotan*, pp. 543 sq.; for Wei-li, see below, p. 1231.

lower end broken. Knob cone-shaped with top cut flat, semi-octagonal in section; back flat and flush with one side of staff, which is sq. in section. But for this flat back resembles L. B. IV. iv. 001, etc. (q.v.). Staff $4\frac{1}{2}'' \times 1''$ (max.) $\times \frac{3}{4}''$ (max.); knob, H. $3\frac{15}{16}''$, diam. of base $2\frac{1}{2}''$.

Khora. I. i. 001–5. Five frs. of turned wooden balusters, all made up of combination of ball and reel mouldings and all but 005 showing tenon at end. Reel mouldings have double ring-moulding round waist. Lengths $5\frac{5}{16}''$ to $8\frac{3}{8}''$, diam. $1\frac{3}{4}''$.

Khora. I. i. 006–7. Two finials of turned wood. General shape as Khora. 003, but much larger in diam. Sq. dowel-hole in base. Chipped, and wood very soft. *006*, H. $4\frac{1}{2}''$, diam. of base $3''$; *007*, H. $4\frac{1}{4}''$, diam. of base $3\frac{1}{2}''$.

Khora. I. i. 008. Fr. of turned wood from baluster (?). In shape a flattened sphere, divided into three rings by incised grooves. Beginning of sq. hole for dowel at either end. Wood soft. H. $1\frac{3}{4}''$, diam. $2\frac{1}{2}''$ to $1''$.

Khora. I. ii. 001. Wooden relief statuette of Buddha, seated in meditation on straight throne; elliptical vesica and circular halo. L. side of vesica broken off. Head well finished; remainder without detail, and portion of fig. below interlocked hands apparently unfinished. Plentiful traces over all of paint now vanished. Wood hard. H. $5\frac{7}{8}''$, gr. width (broken) $2\frac{15}{16}''$. Pl. XLVII.

Khora. II. i. 001. Wooden relief head, features and general surface much decayed. High coiffure with head-dress; details indistinguishable, but apparently treated as in Mi. xi. 0013. Wood split and rotten. H. $3\frac{1}{2}''$. Pl. XIV.

Khora. II. i. 002. Stucco relief fr., circular orn. applied to dress of fig. At centre, group of four small circles, surrounded by two plain rings and outer row of small circles alternately green and red. Traces only of colour, over white slip. Red clay, burnt. Diam. $1\frac{3}{4}''$.

Khora. II. i. 003. Stucco relief fr., representing folds of looped-up drapery orn. with small spiral bead orns. Ultramarine over white slip. White 'plaster of Paris' stucco. $3'' \times 1\frac{5}{8}''$.

Khora. IV. i. 001. Wooden relief carving. Small oblong block with sunk carving on one face, showing kneeling fig. with hands clasped in adoration. Niche V-shaped in section, and surface of fig. flush with edges of block. Charred behind. $2\frac{5}{8}'' \times 1\frac{3}{8}'' \times \frac{9}{16}''$. Pl. XLVII.

Khora. IV. i. 002. Fr. of wooden cornice, painted and carved. Consists of oblong board, R. end intact and showing two mortices behind for ends of supporting beams. Front planed down to $2\frac{1}{2}''$ from upper edge, which is left projecting $\frac{1}{2}''$. The whole richly painted and gilt; upper edge showing gilt crosses on crimson and black ground; main surface, panels, divided by bars of black orn. with gold lozenges, and containing groups of Buddha with worshippers.

Two of these remain, but that on L. is almost entirely effaced. That on R. shows Buddha in deep red robe seated in meditation; feet crossed with soles up, both shoulders draped, oval vesica and halo. On either side are five (?) adoring figs., one apparently with arms raised above head, others with hands clasped or offering flowers (?), and wearing close-fitting robes of black or dark green with gold haloes. Abundant remains of gold also on background. Whole work fine and delicately finished, but hardly now distinguishable. L. panel apparently similar, with Buddha in gilt robe on gilt lotus.

Along bottom edge was affixed a row of relief busts of monsters seen from front, of which two remain. These are alike, with lion heads and manes, wide-open eyes and grinning jaws. Fringe of bushy hair also indicated under chin and down breast; paws folded over one another in front. Painted crimson with black manes (paint of one entirely lost), and affixed to cornice by pin at back. L. end of cornice burnt off, and edges much charred.

Length $1'\ 9''$, H. $1'$; orig. thickness $2\frac{1}{2}''$.

Monsters, H. $3\frac{1}{4}''$. Pl. XLVII.

Khora. IV. i. 003. Fr. of painted wooden beam; back charred. Face much damaged, but shows on red background three circular vesicas containing figs. of divinities. That on L. obliterated; in centre seated divinity, perhaps female; on R. standing Bodhisattva. Colours (put on in several layers), light red, Indian red, pale blue, white, and black. $1'\ 6'' \times 5'' \times 2''$.

Khora. IV. i. 004. Wooden base for statuette; flat, oblong; upper edge along one long side (front) and both ends bevelled and orn. with row of incised lotus petals. Below, along front, row of chevron orns. On top, towards back, is affixed another small oblong block of wood, secured by wooden pin driven up from below; and showing on top traces of another pin which projected upwards, prob. forming tenon of statuette. Small block shows remains of crimson paint. Under-surface and edges of base charred. Main block $8\frac{1}{2}'' \times 6'' \times 1\frac{1}{4}''$, small block $2\frac{3}{4}'' \times 2\frac{1}{8}'' \times 1\frac{1}{8}''$.

Khora. IV. ii. 001. Wooden cup (?) with tall ringed stem, outsplayed foot, and broad shallow bowl. Rim of bowl worn away and foot broken. H. $5\frac{1}{2}''$, diam. $3\frac{1}{4}''$.

Khora. IV. ii. 002. Painted wooden panel; two long edges parallel, and short edges converging at about 60°. In centre a large pink lotus with gilt seed-vessel. Surrounding it, green water, detailed with black spirals. R. and L. of lotus, facing each other, two water-fowls on the water; grey with white throat and breast, barred with black. Work rough. Length of long edge $2'$, shorter edge $13''$; sides *c.* $9''$; orig. thickness $3''$.

CHAPTER XXX

TO KUCHĀ AND THE KERIYA RIVER END

SECTION I.—KORLA AND ITS OLD SITES

Abundance of water and land.

MY stay at Korla during the last few days of December, short as it was, allowed me to appreciate fully the exceptional physical advantages which this bright oasis in the extreme north-east corner of the Tārīm Basin proper enjoys. Situated as it is at the very debouchure of the big river which drains the Baghrash Lake, the Korla oasis has the great boon of possessing a water-supply for irrigation which is not merely abundant but of unfailing regularity. Owing to the fact that the Baghrash Lake acts as a huge natural reservoir storing the spring and summer floods from the T'ien-shan ranges to discharge them again gradually, the Konche-daryā, as the river is called from Korla onwards, preserves throughout the year a remarkable uniformity of volume, a feature wholly unknown elsewhere in the river system of Eastern Turkestān. This volume is greatly in excess of the needs of the lands cultivated by the actual population.[1] In 1907 this was locally estimated, with what seemed a fair approach to accuracy, at 1,700 households, while the water-supply was acknowledged to be sufficient for irrigating an area which might easily support six times as many. Enough suitable land for such extended cultivation is certainly available south of the river (Map No. 49. A. 2).

Restricted development of Korla.

It seems difficult to account for this discrepancy between conditions so exceptionally favourable and the comparative smallness of the settlement. But there is reason to assume that the same difficulties, due to the vicinity of nomadic Mongol neighbours, which at present affect colonization in the Kara-shahr territory, as explained above, have much to do also with retarding the development of Korla, now included in the Kara-shahr district. The Mongols, who, with their herds of horses, etc., frequent the scrub- and reed-covered waste lands south and south-west of Korla for winter grazing, are by no means welcome visitors for the peaceable Turkī settlers. However this may be, it is certainly curious to note the same relative unimportance of Korla in ancient times as well. I believe that we have to locate there the small kingdom of *Wei-hsü* 危須, which figures in the Han Annals in connexion with Yen-ch'i or Kara-shahr, but subsequently disappears from Chinese historical records as a separate territory.

Wei-hsü identified with Korla.

The identification here proposed of Wei-hsü with Korla appears to me proved by the Former Han Annals' notices which place this 'kingdom' with its city of Wei-hsü a hundred li from Yen-ch'i and 260 li to the west of the kingdom of Shan 山.[2] That the latter must be identical with the

[1] Dr. Hedin calculated in March, 1896, the volume in the river where it passes the bridge leading to Korla at *circ.* 72 cubic metres, or about 2,442 cubic feet, per second. The position of this bridge proves that the water-level here remains practically the same throughout the year; see Hedin, *Reisen in Z.-A.*, pp. 68 sq.

To this volume must be added the by no means unimportant amount of water taken off by canals like that of Bāsh-engiz and Shinalga which have their heads above the town.

[2] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. pp. 101, 105. In the latter passage we are told that the people of *Shan*, 'living among the mountains, depend on Yen-ch'i and Wei-hsü for their grain and field produce'. This is still true at the present day of the Mongols and others who frequent the westernmost Kuruk-tāgh. Their supplies are drawn exclusively from Korla and, during the winter when the Baghrash Lake gets frozen, from Kara-shahr.

Mr. Wylie provisionally adopted the conjectural identifi-

habitable portion of the westernmost Kuruk-tāgh has been mentioned above and is subject to no doubt.[3] Against the plain evidence of this bearing and of the topographical indication furnished by the passage of the *Wei lio* to be presently mentioned, no importance can be attached to the distance of 500 li which the *Ch'ien Han shu* notice records between Wei-hsü and the seat of the Governor-General; similar manifest errors of distance reckoning can be proved more than once in the 'Notes on the Western Regions'. We are told that Wei-hsü contained '700 families, comprising a population of 4,900', figures which, whatever their intrinsic value, seem reasonably proportionate to the 4,000 families and 32,100 people mentioned by the same text for Yen-ch'i or Kara-shahr.

Wei-li located on Konche-daryā.

The Annals of the Later Han do not specify the position of Wei-hsü, but mention it along with the kingdoms of Yen-ch'i, Shan, and Wei-li among the territories by the punishment of which in A.D. 94 the Protector-General Pan Ch'ao completed his pacification of the Western regions.[4] We receive a more definite topographical indication in a passage of the *Wei lio* (composed between A.D. 239–65) which describes the 'route of the centre', discussed by us before, as passing from Lou-lan to the kingdoms of Wei-li, Wei-hsü, and Shan, 'which all depend on Yen-ch'i'.[5] In view of the geographical order in which the *Wei lio's* description of the route proceeds we are justified in placing Wei-li 尉犁 between Lou-lan and Wei-hsü, and with this all other indications concerning Wei-li fall exactly into line. The Former Han Annals' notice of this territory clearly states that it adjoined Shan-shan, i.e. the Lop region, and Chü-mo or Charchan on the south.[6] At the same time we are told that Wei-li lay 240 li to the west of Shan, or the territory of the westernmost Kuruk-tāgh, being thus slightly nearer to it than Wei-hsü. These bearings and that of Ch'ü-li, to be discussed presently, which lay to the south-west of Wei-li, necessarily take us to the tracts which stretch along the Konche-daryā below Korla approximately as far down as its present junction with the Tārīm near the large village of Tikenlik.

Present cultivation near Konche-daryā.

My journey of 1915 along the Konche-daryā showed me the extensive area of cultivable and easily irrigated lands which stretches from the left bank of the river below Konche (Map No. 45. D. 3) to the foot of the Kuruk-tāgh hills, and which the Chinese have in recent times endeavoured to colonize as the new district of Kara-kum or Konche.[7] The surveys made on the same journey to the north-west of Tikenlik showed also the number of small agricultural settlements which have sprung up recently along the branching beds of the Tārīm and the Inchike-daryā, in spite of the difficulties caused by riverine vagaries. In view of these observations I think we can safely identify Wei-li with the large cultivable, though at present very imperfectly developed, area just described. Its natural boundary northward is likely to have been the belt of low barren terraces which juts out westwards from the foot of the Kuruk-tāgh near the village of Shinalga, and which at present divides Kara-kum from Korla. In agreement with the relatively great extent of the area indicated, we find that Wei-li is credited in the Former Han Annals' notice with a larger population than Wei-hsü or Korla, viz. 1,200 families and 9,600 persons.

cation, proposed in a Chinese dictionary published in 1766, of Wei-hsü with a place called Chagan-tungi to the north-east of Kara-shahr. M. Chavannes has already (*T'oung-pao*, 1905, p. 552, note 5) duly emphasized the need of caution in the case of these identifications of the *Hsi yü t'ung wên chih*. In this present instance the bearing of Wei-hsü relative to Shan suffices to prove the impossibility of the location proposed.

[3] Cf. above, pp. 333 sq.; Chavannes, *T'oung-pao*, 1905, p. 552, note 7. Grenard, *Mission Dutreuil de Rhins*, ii. p. 61, first correctly identified the position of *Shan*.

[4] Cf. Chavannes, *T'oung-pao*, 1907, pp. 210 sq.; also *T'oung-pao*, 1906, pp. 234, 236.

[5] See Chavannes, *T'oung-pao*, 1905, p. 552, with notes 5–7; cf. also above, p. 418.

[6] Cf. Wylie, *J. Anthrop. Inst.*, xi. p. 101; for Chü-mo and Shan-shan, see above, pp. 295 sq., 323 sqq.

[7] For a brief preliminary reference to this interesting area which, given an adequate supply of suitable colonists and efficient administration, could easily be developed into a large oasis, see *Third Journey of Exploration*, *Geogr. Journal*, xlviii. p. 207.

Wei-hsü absorbed in Yen-ch'i.

After the 'Epoch of the Three Kingdoms', from which the *Wei lio's* information dates, Wei-hsü seems to disappear from Chinese historical records as a separate petty state. The Chin dynasty's Annals make Yen-ch'i conterminous on the south with Wei-li.[7a] We find the same statement also in the T'ang Annals' description of Yen-ch'i.[8] It may hence be concluded with some probability that Wei-hsü in Chin times became absorbed in Yen-ch'i, just as Korla at the present day is included in the Kara-shahr district, or *hsien*.

Site of *Uzgen-bulak*.

In an area so abundantly watered as the Korla tract not much could be hoped for in the way of ruins of early date. In the course of my local inquiries I could learn of only three 'old towns', and at none of them were any datable remains traceable. Uzgen-bulak, the largest of them, proved to be a large oblong enclosure, situated about three-quarters of a mile from the south-west corner of the crumbling wall which Yāqūb Bēg built round Korla town. The earth ramparts of Uzgen-bulak form roughly a rectangle, measuring about 380 yards from north to south and about 250 yards across. They rise from 12 to 15 feet above the water-logged ground. Towards the north-west corner a large shapeless mound of stamped clay rises to a height of about 18–20 feet. Outside the south-east corner and near by lies a Ziārat with some Muhammadan tombs, suggesting the survival of local worship from earlier times.

Walled enclosures of *Yantak-shahr*, *Shāh Kalandar*.

Yantak-shahr is the name of a smaller walled enclosure of the same type, lying among fields about 1½ miles to the south-south-east of Korla town. It forms a square of about 140 yards near the south-east corner of which the remains of stamped clay walls are still recognizable. Elsewhere they have decayed into mere earth-mounds now partly occupied by farm dwellings. 'Shāh Kalandar town', the third *kōne-shahr*, lies about 3½ miles to the south-west from Korla, also amidst cultivation and close to a stream fed by springs. It is enclosed by much-decayed circular walls of earth, about 510 yards in circumference and measuring 30 to 40 feet across at their base. They rise 12 to 15 feet above the level of the interior, which contains a mound in the centre but is elsewhere marsh ground. On the north-west a much-frequented Muhammadan shrine adjoins the circumvallation, which by its shape suggests antiquity.

Local reports of ruined town.

The satisfaction I felt at having once more reached the vicinity of the Taklamakān, my own favourite working-ground, acted as a special inducement for testing the persistent reports about an 'old town' which Korla people declared that they had seen, half-buried amidst the dunes in the desert south-westwards. Such information about this local *kötek-shahri* as had reached us while at 'Ming-oi' from the fear-bound tongues of Korla labourers had sounded rather vague and romantic. It assumed, however, a more substantial form when Tāhir Bēg, whom the prefect of Kara-shahr had deputed to act as my local factotum, avowed knowledge of this 'old town'. His own cousin Mūsā, the 'Ḥājī', a well-to-do farmer from the village of Tazken, he declared, had some five years before come upon the ruins, while on a hunting expedition, in the desert west of the Konche-daryā. When subsequently the discoverer himself was produced at Korla, he described the place he had seen as a small ruined fort with a conspicuous gate. The details he gave seemed matter of fact and at any rate to agree in essential points with the previously communicated report. Mūsā Ḥājī averred that he had not seen the ruins again since a big dust-storm immediately after the discovery had prevented return, but was prepared to guide me to the site. His statement appeared circumstantial enough to deserve to be followed up on the spot, especially as the existence of some ruined *gumbaz*, or domed structures, in the belt of riverine jungle near the Inchike-daryā was attested independently by several Korla people, and had also been reported to Dr. Hedin on his way from Shahyār to Korla in 1896.[9]

[7a] Cf. Chavannes, *Ancient Khotan*, i. p. 540.

[8] Cf. Chavannes, *Turcs occid.*, p. 110.

[9] Cf. Hedin, *Reisen in Z.-A.*, p. 65.

I accordingly started on New Year's Day, 1908, to the south-west with light baggage and a small posse of labourers and guides. All Korla was interested in what, no doubt, was locally understood to be a real 'treasure quest'. In spite of the bitter winter cold and expected hardships, men in numbers offered themselves as labourers, a novel experience on such occasions. Two short marches brought us first to the extreme south-west fringe of Korla cultivation beyond Tazken, and then across fine grazing land and luxuriant riverine jungle to the Konche-daryā. We crossed the hard-frozen river below the Konche-mazār where it fills an unfordable bed over 30 yards wide (Map No. 45. D. 3), and then moved up the belt of riverine jungle accompanying the bed of the Charchak-daryā, which in certain years carries flood-water coming from the Kuchā side.

Start for desert site.

On this march to the well and shepherd-station of Dŏru-sukte (Map No. 45. C. 3) I first noticed traces of a form of cultivation which is widely practised along the lower courses of the Tārīm, the Inchike, and Konche rivers, and is not without antiquarian interest. Stretches of open level ground which are inundated after several years' interval by a particularly high flood can be sown in the following spring and, as they retain sufficient moisture from that big watering, yield then an abundant harvest. But only in very rare instances can cultivation be continued for a second year by means of small irrigation cuts from the river-bed. Cultivation carried on in this fashion occasionally leads to transient occupation, and objects left behind at the end of it may, when turning up as 'finds' centuries later, give rise to quite erroneous conclusions as to the former existence of permanent settlements on such ground.

Intermittent riverine cultivation.

It was in the desert belt south between the Charchak and Inchike river-beds that Mūsā Ḥājī had, as he declared, seen his ruined site. The short expedition which I made into this wholly unsurveyed area, and which was facilitated by the ice found in a newly formed lateral lakelet of the Inchike-daryā known as Jigda-salā (Map No. 45. B. 4), proved very instructive geographically. It showed me in typical form the constant changes brought about on this ground by shifting river-courses and the concomitant struggle of the vegetation belts which they produce with the drift-sand, ever close at hand to follow up local desiccation. But after several days' search in the desert Mūsā Ḥājī had to confess his inability to find the 'old town' which he still firmly believed that he had seen and approached. Fortunately I had taken care from the start to have him accompanied by level-headed Darōghas from Korla. It was due to their careful search and topographical sense that on a patch of bare clay steppe surrounded by lines of dunes, 8–10 feet high and strewn with dead Toghraks and tamarisks, a small ruined circumvallation was ultimately located (Map No. 45. C. 3).

Search of desert belt south of Charchak river.

It was a circular rampart of earth, about 180 yards in circumference, about 30 feet thick at its base and rising with its narrow top to about 12 feet above the present ground-level. A few pieces of coarse but hard pottery lay near what appeared to have been the entrance. No other marks of occupation were found on the surface; but it must be remembered that there were no signs of wind-erosion either, which alone could display such relics on ground of this kind. That the enclosure was meant to serve as a place of safety or as a watch-post is certain, and its size and shape recalled Merdek-tim.[10] But there was nothing to help towards determining its age. On ground subject to moisture through riverine changes at recurring periods no ancient refuse and the like could possibly survive. Mūsā Ḥājī stoutly denied that this ruined enclosure was his 'old town'—but anyhow he could show us no other. Going about $2\frac{1}{2}$ miles north, a dry river-bed lined with dead Toghraks was crossed, and beyond this, after another $1\frac{1}{2}$ miles and not far from the edge of the living jungle belt, I was shown a small ruined 'Gumbaz', about 8 yards square, built of clay lumps. It manifestly marked a Muhammadan grave, and did not look of great age. I may note here in passing that

Remains of circular enclosure.

[10] See above, pp. 452 sq.

shepherds from Yangi-hissār and other small oases by the high road west of Korla regularly graze their flocks along the Inchike and Charchak river-beds.

Desert north of *Charchak-daryā.*

From our next camp at Mukhtār-chöl (Map No. 45. c. 3) we subsequently pushed a net of systematic reconnaissances into the desert north of the present jungle belt of the Charchak-daryā in order to test the equally positive assertions about an extensive old town which two other Korla hunters, who had joined later, declared that they had seen in that direction some seven years earlier. Here two old river-beds were met with, lined by the usual rows of Toghraks and tamarisk-cones mostly dead; beyond extended a bare clay steppe where the drift-sand lay only in small dunes and where the view was quite open and ranged far towards the foot of the mountains. In the end I was able to establish with certainty that those elaborate reports, too, had no more substantial foundation than the existence of a rude log-built hut almost buried between tamarisk-cones, evidently an old 'Öghil' of herdsmen, and the occurrence of a few fragments of coarse pottery and slag found on ground slightly eroded some 10 miles north of Mukhtār-chöl. There was no indication of great age about any of these remains, while, on the other hand, I found ocular evidence that this ground was being still regularly visited by men in search of fuel from Charchi, a small oasis on the high road. Close examination of the physical conditions convinced me that no permanent settlement on any scale could have existed on this ground within historical times.

What still continued to puzzle me was how to account for the psychology and conduct displayed by my would-be guides. Their assurance about what they believed that they had seen appeared to be quite genuine, and they all stuck stoutly to their story, undisturbed by the fact that the location of their respective 'old towns' avowedly differed. There was no obvious reason for conscious imposition, since no reward for their guidance had been offered or asked for in advance. At last the clue to the mystery revealed itself in a folk-lore belief ascertained after careful sounding. All the Korla folk were under the spell of the old tradition, which elsewhere too haunts the outskirts of the great desert, about 'old towns' buried by the sands and full of hidden treasure. With this tradition is firmly coupled a belief that the demons guarding such ruins prevent those who chance upon them from ever seeing them a second time. Mūsā Ḥājī and his fellow-hunters had manifestly tried their luck in searching for the ruins of their local *kötek-shahri* at different times and in different areas of the desert. In offering their guidance they had acted quite *bona fide*, prompted by the hope that my supposed 'Wilāyatī' magic would overcome the evil genii hiding the walled town of which their own imaginative eyes had before caught merely a glimpse—always during, or immediately before, a dust-storm! That I, too, failed to secure them a chance of discovering all those hidden treasures was a source of genuine disappointment for them. The tradition accounting for all this is obviously but a survival of old popular legends like that which Hsüan-tsang had heard at P'i-mo, west of Khotan, and the localized form of which he records in his story about the sand-buried town of Ho-lao-lo-chia.[11]

Section II.—FROM THE INCHIKE RIVER TO KUCHĀ

Ruins of *Gumbaz.*

Meanwhile the efforts of a sober-minded Korla Yüz-bāshi had secured a shepherd guide who knew the exact position of the previously reported 'Gumbaz' near the Inchike river. For this I set out on January 9, and, after crossing again the dune belt south of the Charchak bed, reached the ruins on the following day. They proved to be situated amidst dunes with plentiful remains of *kötek*, or dead forest, at a point about 2 miles north of the Inchike river (Map No. 45. A. 4). It soon became clear

[11] Cf. Julien, *Mémoires*, ii. p. 245; Watters, *Yuan Chwang*, ii. p. 298; *Ancient Khotan*, i. pp. 455, 460.

For early notices of these traditions current in oases along the Taklamakān about supposed ruins of a *kötek-shahri* or *shahr-i-katak*, cf. Elias-Ross, *Tārīkh-i-Rashīdī*, p. 295, also note, p. 11 sq.; *Forsyth Mission Report*, pp. 27 sq.

that the remains found here were those of an old Muhammadan cemetery resembling those I had examined more than a year before near the Charchan River.[1] The most conspicuous among them was of a hall-like structure, about 19 feet square (Fig. 301), open to the south and built of rather porous bricks 18″ × 6″ × 4″. In front of this structure, at a distance of about 19 feet, stretched a low wall, probably part of an enclosure otherwise decayed. Adjoining it was a small domed ruin 7 feet square inside, facing south, which communicated with the enclosure by a small arched opening only 4 feet high, and evidently had served as a porch. The clearing of the hall and enclosure brought to light only fragments of plaster with open-work ornament which seemed to have belonged to a screen.[1a]

Its geometrical pattern plainly suggested Muhammadan origin, and this was soon confirmed by the clearing of a smaller ruin situated about 160 yards to the south-east on what obviously was an old tamarisk-cone. Here there emerged between broken walls of a narrow enclosure a low platform about $3\frac{1}{2}$ feet long, which obviously marked a Muslim grave. A wooden tablet, of the 'Takhtī' shape, about 18 inches long, turned up close to the platform and retained traces of Arabic writing. Another completely decayed structure about 300 yards west of the first proved to be that of a small Mazār surrounded by graves in which the skeletons, partly exposed, were all laid in the orthodox Muhammadan fashion. The whole site had evidently served as a Muhammadan burial-ground, but not in recent times; for the Toghrak beams and posts found at the ruins looked almost as withered and fissured as those I had found exposed at sites like Dandān-oilik or Kara-dong. A Yangi-hissār shepherd acknowledged that he had seen one or two similar *gumbaz* further west in the desert. But as he could or would not indicate their exact position, and their character could not be in doubt, I refrained from a search for them. Old Muhammadan cemetery.

From this point I marched up the Inchike-daryā on January 12, and then at the shepherd's hut of Chong-tokai separated from R. B. Lāl Singh. While he was to follow the previously unmapped river-course right through to Shahyār, I myself struck through the broad belt of unsurveyed desert north-westwards and, after covering by two forced marches the intervening distance of some 60 miles, reached the great northern caravan route at the oasis of Bugur. The ground traversed to this point, as shown in Map No. 42, offered no scope for antiquarian observations. It consisted in the south of alternating belts of drift-sand and of riverine jungle along the Charchak-daryā bed, while north of Kök-chöl followed a wide expanse of grazing and marshes in which the river of Bugur terminates. Being anxious to reach Kuchā as soon as possible, I could spare no time for visiting old remains about Bugur. Nor do I propose to record here what the rapid examination *en route* of certain obviously ancient watch-towers and ruined posts along the high road to Kuchā showed me. In 1915 I had occasion to survey in detail any old remains that could be traced along the Korla-Kuchā road, which undoubtedly marks the line followed since Han times by the 'Northern route', the great highway for Chinese trade and military movements. It is hence in the report on my third Marches to *Bugur* and *Kuchā*.

[1] See above, pp. 305 sq.

[1a] The following list describes these fragments:

Gumbaz. Korla. 001. Stucco relief fr. Part of open-work panel for applying to solid background. Within plain frame, design of contingent circles, joined by round-headed double rivets, and containing 'Maltese' crosses. Design peculiarly 'Coptic' in character. Clay mixed with fine hair; remains of white slip on face. $5'' \times 5\frac{1}{2}'' \times \frac{1}{2}''$.

Gumbaz. Korla. 002. Stucco relief fr. of open-work panel; part of plain frame and design apparently of interlaced squares. Clay mixed with fine hair; remains of white slip. $2\frac{3}{4}'' \times 1\frac{1}{4}'' \times \frac{1}{2}''$.

Gumbaz. Korla. 003. Stucco relief fr. of open-work panel, with geometric design of intersecting straight lines, circles, etc., joined by round-headed rivets. Clay mixed with fine hair; remains of white slip. $3\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

Gumbaz. Korla. 004. Stucco relief fr. of open-work panel with rectilinear design of interlacing hexagons within a plain frame; closely resembles much 'Coptic' work. Clay mixed with fine hairs; plentiful remains of white slip. $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{1}{2}''$.

journey that observations on the historical topography and old remains of the Bugur-Kuchā section can more appropriately be discussed.

Territory of *Ch'ü-li.*

I may, however, conveniently add here some remarks concerning the ground to the south which was touched by our surveys along the Inchike, or Shahyār, River. There can, I think, be no doubt that the area comprising the riverine tracts between the Inchike-daryā and the Tārīm from below Shahyār to the vicinity of the Konche-daryā is identical with the territory of *Ch'ü-li* 渠黎 which the Former Han Annals repeatedly mention in connexion with an early Chinese military colony.[2] The special notice on Ch'ü-li tells us that this territory, the modest resources of which are sufficiently indicated by the mention of a population of '130 families, comprising 1,480 persons', with 150 troops, had Wei-li as its neighbour on the north-east, Chü-mo on the south-east, and Ching-chüeh on the south.[3] The river it adjoined led westwards to Kuchā at a distance of 580 li.[4] A glance at the general map shows that the position here described with reference to Wei-li (Kara-kum–Tikenlik), Chü-mo (Charchan), Ching-chüeh (Niya Site), and Kuchā corresponds exactly to that occupied by the riverine tracts above indicated.

Cultivation along *Inchike* and *Tārīm R.*

The maps Nos. 39, 42 will show how small and scattered are the patches of cultivation to be found now along the line of the Inchike-daryā surveyed by R. B. Lāl Singh, and the same remark applies equally to the corresponding section of the Tārīm River south of it, as was seen on its survey in 1915. Nevertheless the possibility of cultivation, whether permanent or of the intermittent type above mentioned, is proved within the limits fixed by the physical difficulties which frequent changes in the river-courses and risks of exceptional floods and abnormally low water-levels must necessarily imply on such ground. It thus becomes possible to account for the efforts which the Chinese, during the earliest period of their expansion into the Tārīm Basin, made for establishing a military agricultural colony in Ch'ü-li.

Military agricultural colony of *Ch'ü-li.*

These efforts began immediately after the successful expedition to Ta-yüan or Farghāna (101 B.C.), when we are told of several hundred military colonists being settled at Lun-t'ai 輪臺 and Ch'ü-li.[5] The identity of Lun-t'ai with the relatively large oasis of Bugur (Map No. 42. A. 1, 2; 39. D. 1) has been recognized long ago and is certain.[6] The Former Han Annals' notice of Ch'ü-li, after referring to this first establishment of the colony, reproduces at length a memorial addressed to the Emperor Wu-ti in 90 B.C. and the rescript issued in reply, which clearly suggest that its success was then of short duration.[7] Incidentally, however, we receive a glimpse of the natural difficulties besetting agriculture on such ground in the references which the memorial makes to the need of improving the naturally fertile soil there by 'drains and watercourses' and of settling the indigenous people, who manifestly were semi-nomadic like the present Lopliks. The hope expressed was that 'following their original vocation of rearing cattle, they would also clear the land'.

The proposal made in the memorial of re-establishing military colonies at Lun-t'ai and in the territories of Ch'ü-li and Chieh-chih[8] east of it was negatived at the time. But in 68 B.C. the

[2] This identification has been correctly indicated already by Dr. Herrmann, *Seidenstrassen*, p. 121. It is in no way affected by an apparent misapprehension as to the present physical conditions of this tract, as shown by his reference to an 'oasis Örmäng'.

[3] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. p. 95.

[4] This is obviously the sense of the passage which Mr. Wylie translates: 'It (Ch'ü-li) is bounded on the west by a river, which leads to Kuei-tzŭ (Kuchā) at a distance of 580 li.' The Muzart-daryā flowing past Kuchā and Shahyār and lower down known as the Inchike-daryā is clearly meant.

[5] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 22; for a lucid discussion of this passage in the *Ch'ien Han shu*, see Chavannes, *T'oung-pao*, 1907, p. 153, note 2.

[6] See Wylie, *J. Anthrop. Inst.*, x. p. 22. The *Ch'ien Han shu*, *ibid.*, xi. p. 99, declares Lun-t'ai conterminous with the territory of Ch'ü-li.

[7] See Wylie, *J. Anthrop. Inst.*, xi. pp. 95 sq.

[8] This *Chieh-chih* 捷枝 of the text translated by Mr. Wylie is not mentioned elsewhere. The indicated position eastwards suggests its possible identity with the oases of Yangi-hissār and Chādir on the present high road east of Bugur. At one of these, I believe, must be located Wu-lei 烏壘

Chinese commander Chêng Chi formed a military encampment with 1,500 Chinese troops in Ch'ü-li, and during the following years made this territory his base for a series of successful operations against Chü-shih, or Turfān, which led to the complete subjugation of that state and even to the extension of Chinese control over the Hsiung-nu tribes immediately to the north-east of it.[9] In recognition of these achievements Chêng Chi was in 60 B.C. made the first 'Protector-General' (Tu-hu 都護), and as the *Ch'ien Han shu* places henceforth the seat of this chief political representative of the Empire in the Western regions at Wu-lei, north of Ch'ü-li, i.e. at Yangi-hissār or Chādir,[10] it is reasonable to assume that the selection of this particular locality was dictated by its vicinity to Ch'ü-li, the original base of Chêng Chi's far-reaching activity.

Chinese military base at *Ch'ü-li.*

In view of what has been explained above as to the physical drawbacks to permanent settlement in the riverine tract represented by the ancient Ch'ü-li, it might appear difficult at first sight to account for the importance which the Chinese evidently attached to its colonization during those early operations. In reality it must have been mainly due to the advantageous position which the tract occupies relative to the great Chinese road via Lou-lan, the ancient 'Northern route'. From the map it is easy to see that this small Mesopotamia lies on the most direct line connecting Lou-lan with Kuchā and the other main oases westwards. Through it passes also the nearest route for reaching the latter from the present Lop region or Shan-shan, a route still regularly used for caravan traffic at the present day. This point must have claimed all the more attention because we know that Chêng Chi was charged also with the protection of the 'Southern route' passing through Shan-shan westwards.[11] Finally it should be noted that Ch'ü-li supplied a more convenient base for operations towards Kara-shahr and thence towards Turfān than Lou-lan could ever have done. Lou-lan lay far away from the small states in the Tārīm Basin upon which the Chinese had to depend for their auxiliary forces, and was separated from Turfān by the great barren plateaus of the Kuruk-tāgh, a formidable obstacle in the matter of supplies and transport. The very fact that Ch'ü-li held only a very thin indigenous population, while potentially fertile lands were abundant, may have furnished an additional reason for choosing it for a military colony.

Military advantages of position.

But however this may be, the drawbacks presented by nature on ground where river-beds are constantly shifting and canals, whether for irrigation or drainage, most difficult to maintain must have soon made themselves felt there quite as much as they would nowadays. It is to them, I believe, that we may safely attribute both the selection of Wu-lei for the Protector-General's seat from 60 B.C. onwards and the complete disappearance of Ch'ü-li from the later Chinese records. Neither in the Later Han Annals' account of the Western regions nor in that of the *Wei lio* do we find the territory mentioned again under that or any other name. Its importance for the Chinese had evidently been ephemeral. What with this and the destruction inseparable from constant riverine changes, the total absence of ancient remains in this region can in no way cause surprise.

Protector-General established at *Wu-lei.*

Section III.—THROUGH THE TAKLAMAKĀN TO KARA-DONG

My stay at Kuchā, which I reached on January 17, was bound to be short and busy. It was there that I finally had to settle all plans and arrangements for the journey which was to take me right through the whole width of the desert basin to the southern edge of the Taklamakān. Already,

Reasons for regaining Khotan.

from 60 B.C. onwards the seat of the Chinese Protector-General; cf. Herrmann, *Seidenstrassen*, p. 38, note 4. Charchi, west of Korla, which (*ibid.*, p. 121) is proposed as a location of Chieh-chih on account of the apparent similarity of the name, is a much smaller place than either of the above oases—though its name for some reason is printed very prominently in Dr. Hassenstein's map. Its scanty water-supply makes its selection for an agricultural colony very unlikely.

[9] See Wylie, *J. Anthrop. Inst.*, xi. pp. 107 sqq.; Chavannes, *T'oung-pao*, 1907, p. 154, note 1.

[10] Cf. Wylie, *J. Anthrop. Inst.*, xi. p. 95; also above, note 8.

[11] See Chavannes, *T'oung-pao*, 1907, p. 154, note 1.

while I was near Korla, I had learned from a letter of Rai Rām Singh, written after he had reached Khotan via Charkhlik, that the search set on foot under my instructions of the preceding spring and carried out by some of my old 'treasure-seeking' guides on the Khotan side had resulted in the tracing of several unexplored sites in the desert below Keriya and Khotan. A letter from my old friend and factotum Badruddīn Khān, the Aksakāl of Indian and Afghān traders at Khotan, which a trader just arrived delivered to me at Kuchā, confirmed this information. The details it gave of the great number of 'old houses', i.e. ruined structures, traced at several of these sites, and about the position of the latter, furnished ground for believing that I should need all the time that could possibly be secured in order to explore them before the heat and the sand-storms of the spring would make work on that ground impracticable.

Decision to cross Taklamakān.

This consideration compelled a move south as early as possible, and as Kara-dong near the terminal course of the Keriya River was reported as a site where more ruins had come to light since my visit of 1901, I decided to strike due south from Kuchā to where the Keriya River dies away in the sand, and thus to save time by a 'short cut'. I knew well that this desert crossing was beset with serious difficulties and risks also. But Dr. Hedin's pioneer journey of 1896 showed that it was practicable, if prepared and carried through with due care and precautions. The saving in time which this plan promised to effect was a great attraction—and so, too, to me personally, I confess, the chance of once more crossing the very heart of the desert. For the safe transport to Khotan of my heavy convoy of antiques, making up twenty-four camel-loads, there offered itself conveniently the well-known trade route leading up the dry bed of the Khotan River, and on this it was accordingly started under the care of Chiang Ssŭ-yeh.

Visits to *Kuchā* sites.

The considerations here briefly indicated will explain why during my week's stay at Kuchā I could make no attempt to supplement in any way the protracted labours which had been devoted to the plentiful ancient remains of this great and important oasis during the preceding five years by Japanese, Russian, German, and French archaeological expeditions. I managed, however, to visit practically all the chief ruined sites within a day's ride from Kuchā town, the interesting cave-temples near Kum-tura, Kizil-kāghe, and Kīrish, and the large temple ruins of Duldur-ākhur and Su-bāshi (Map No. 34. B–D. 1, 2; Fig. 292). To notice at the last two sites the systematic thoroughness and care with which their final clearing had been effected by the French Mission under Professor P. Pelliot was a source of special satisfaction. Useful information was collected also from local Afghān traders as to the necessarily rather different operations by which so many important acquisitions of ancient manuscripts from Kuchā, including the famous 'Bower Manuscript', now mainly in the British collection formed under Dr. Hoernle's care, had been secured since 1890.

Importance of Kuchā in antiquity.

Kuchā has at all periods been one of the most important territories in the Tārīm Basin, in many ways a worthy pendant of Khotan owing to its geographical position and the rôle it has played in Buddhist art and civilization. It is hence particularly fortunate that Professor Sylvain Lévi, in the same masterly paper in which he has proved the identity of the remarkable Indo-European language previously designated as 'Tokhārī B' with the tongue once spoken at Kuchā, has also furnished us with a lucid and exhaustive analysis of all historical data about Kuchā found in the Chinese Annals and other sources.[1] This makes it easier for me to leave whatever observations I might have to offer on the historical topography of Kuchā, and on the part which geographical conditions have played in determining the importance of this great and flourishing oasis in ancient times, for the report on my third journey. Then I was able to devote a number of weeks to a close survey both of the actually cultivated area and of that which, as is proved by the evidence of numerous ancient sites found scattered in the scrubby desert to the east, south, and west, must once have formed part

[1] Cf. S. Lévi, *Le 'Tokharien B', langue de Koutcha*, *J. Asiat.*, 1913, sept.–oct., pp. 323–80.

of it. Here, as in the case of the ancient oases south of the Taklamakān, the question of 'desiccation' is bound to force itself upon the attention of the antiquarian student.

Interest of desert crossing.

On January 25 I left Kuchā town, and on the following day reached Shahyār, the furthest settlement to the south and now the head-quarters of a separate district. A day's halt had to suffice for the last preparations, which included the raising of a month and a half's supplies for my relatively large party, and after moving south across the frozen Tārīm we left the last shepherds' huts behind on January 30. The trying and, as experience showed, distinctly hazardous journey across high dunes for a marching distance of close on 180 miles has been fully described in my Personal Narrative.[2] The detailed account given there of the physical features of the true 'Sea of Sand' we traversed renders it unnecessary to record here the manifold observations of geographical interest which this desert crossing enabled me to make, and which the Maps Nos. 30, 35, 36 will help to illustrate in their topographical aspects. It must suffice here to indicate those few points which have a bearing, direct or indirect, on the question whether this vast dune-covered area has been visited by man during historical or prehistorical times.[3]

Dawāns parallel to Tārīm course.

From the Achchik-daryā (Map No. 35. B. 2), where we crossed the last traceable dry bed occasionally receiving water from the Tārīm, to our Camp 317 (Map No. 35. B. 4), a direct distance of about 28 miles, the east-west bearing of the high sand ridges, or 'Dawāns', crossed in succession, lay approximately parallel to the Tārīm. This furnished a clear indication that the system of drift-sand formations on this ground was mainly influenced by the great riverine belt that it borders. The patches of bare clay crossed here in places, however, did not yield any stone-age or other relics such as would mark ground occupied by small temporary settlements of hunters or herdsmen in prehistoric times.

Change in direction of Dawāns.

From Camp 317 to the south, a distinct change made itself noticeable in the configuration of the high ridges of sand as distinguished from individual dunes. The 'Dawāns', too distant from our track for any safe estimate of height, but certainly rising in places up to 150 feet or more and continuous for miles, now invariably bore from north-north-east to south-south-west. This is, as the general map will show at a glance, exactly the general bearing of the course of the lower Keriya River, which itself is determined by the configuration of the slope contours in this part of the great desert basin. This direction of the Dawāns is an unmistakable sign that the Keriya River once reached so far; for it is a constant observation made everywhere, both in the Taklamakān and in the Lop region, that the drift-sand near river-beds, whether dead or still carrying water, is heaped up in 'Dawāns' parallel to the latter.[4]

Rows of living Toghraks.

A striking confirmation is supplied by the fact that in the groups of living Toghraks which were met with at short intervals for a direct distance of over 13 miles south of Camp 317, as seen in Map No. 35. B. 4, the trees were found everywhere growing in lines roughly directed from north-east to south-west or north to south. The tendency of wild poplars and other trees in the riverine jungle belts of the Tārīm Basin to range themselves close to the river banks or parallel to them is a well-established fact.[5] I may add that the identical bearing was observed also in the rows of Toghraks, living or more frequently dead, that were met with at rare intervals on the three marches south of Camp 318. Water, which up to this halting-place was obtained from shallow wells dug in

[2] See *Desert Cathay*, ii. pp. 379–405.

[3] I may conveniently note here that about two miles to the south of the last shepherds' huts at Samsak-daryāsi (Map No. 35. B. 1) I found traces of old fields, probably dating from some intermittent cultivation carried on many years ago on ground reached by occasional floods from the Tārīm. About 2½ miles to the south-east of these huts I was shown a small mound known as *Kizil-dong* where some débris of rough pottery indicated occupation of uncertain date.

[4] Cf. above, pp. 451 sq.; Hedin, *Central Asia*, i. p. 363.

[5] Cf. e.g. Hedin, *Reisen in Z.-A.*, pp. 54 sq.; above, pp. 355, 452.

depressions, could no longer be reached at the next two camps. But some miles before Camp 320, at a point marked in Map No. 36. B. 2, I noticed the first indication of an ancient river-bed in a narrow steep-banked depression, running from south to north, half smothered by dunes but undoubtedly cut by water action.

North end of dead Keriya R. delta.

On the evening of the following day, February 6, having shaped our course now to S. 190° W., we reached a big 'Dawān', rising to 300 feet or so. Surmounting it we found ourselves suddenly before a belt of dead forest that unmistakably marked the northern end of an old dried-up delta of the Keriya River. Here at Camp 321 (Map No. 36. A. 2) a well yielding fresh water could be dug in a depression eroded ages ago by the dying river. There could be no doubt here that we had rightly struck, as expected, the ancient termination of the dune-covered delta in which the Keriya River loses itself. Yet it was also at this point that the most trying portion of our desert crossing commenced. For the difficulties encountered through want of water and guidance in this most deceptive dead delta I may refer to my Personal Narrative. It will suffice here to state that it took us six more marches before we discovered the shallow ice sheet of the dying river (Map No. 30. D. 2). It had taken a new course, as it proved, some four years earlier, a considerable distance to the west of the one which Dr. Hedin had followed in 1896 (see Map No. 30. D. 2).

First traces of earlier human visits.

It was at Camp 323, some 25 miles in a straight line from our entry into this forbidding dry delta, that the first sign of human presence at a past epoch was met with in the shape of a small worked flake of flint,[5a] similar to those found so plentifully on the way to the Lou-lan Site.[6] It was picked up on bare eroded ground within an ancient river-bed, and was certainly of palaeolithic origin. Some nine miles further south and by the same ancient bed a piece of charred wood turned up, also a sign of some human's visit which on such ground might be centuries old. But it was not until after tramping for another 24 miles or so that we came upon definite proof of temporary human occupation in times gone by in the shape of the badly decayed remains of a herdsman's hut (Map No. 30. D. 1). By ascending the actual river-bed for two marches we passed out of the area of bare dunes and dead jungle into a riverine belt of living vegetation. Finally we found ourselves, near the grazing-ground of Yoghan-kum (Map No. 30. D. 3), at the point which I had recognized already in 1901 as the head of the Keriya River delta. On the way we had passed within less than four miles of the ruined site of Kara-dong (Map No. 30. D. 2) without knowing it.

Possibility of route from Keriya River to Tārīm.

It was in connexion with the ruins of a fortified station there explored in 1901 that I had occasion to discuss before the possibility of a regular route having in ancient times led from the end of the Keriya River to the Tārīm, and thus on to Kuchā.[6a] The personal experience gained and the survey effected on the desert crossing just briefly recorded have led me to modify to some extent the conclusion then arrived at. I still believe that the opening up of a route by maintaining wells and small posts along a line roughly corresponding to the one we followed, and by marking the track where the line is particularly liable to be lost, would be practicable. The belief of the energetic Keriya Amban who actually planned such a route, according to M. Grenard's report in 1893,[7] was well founded. But in view of the almost total absence of camel-grazing between the southernmost dry bed of the Tārīm and a march or two below the shepherd station of Tonguz-baste (Map No. 30. D. 3), and taking into account the great distance intervening, I do not think that such a route could nowadays ever become a regular trade route.

Conditions *may* possibly have been somewhat better in Han or even in T'ang times, assuming that the terminal course of the Keriya River has since then shrunk considerably through desiccation.

[5a] **C. 323. 001. Fr. of flint blade,** found in old river-bed near Camp 323, Keriya River delta; broken. Length of whole $\frac{15}{16}$".

[6] See above, pp. 356 sq.

[6a] Cf. *Ancient Khotan*, pp. 449 sq.

[7] Cf. Grenard, *Mission Dutreuil de Rhins*, i. p. 172.

But direct historical or archaeological evidence to prove this there is none. Topographical indications that the waters of the Keriya River once reached or closely approached the Tārīm there are, as already mentioned.[8] But I can see no means for fixing the chronological limits of the change even approximately. Mīrzā Ḥaidar's statement about the Keriya River being among the rivers which empty their waters into the great lake in the desert eastwards is not likely to be based on actual observation, direct or indirect, but reflects only popular belief, which in matters of Turkestān hydrography is usually of the vaguest.[9]

Physical conditions in earlier periods.

What, however, I feel now firmly convinced of from personal knowledge of the ground is the probability that this short line through the desert has served since early times for occasional communication in case of special needs. That the hunters and shepherds visiting the terminal course of the Keriya River at present know of its practicability as an *oghre-yol*, 'thieves' track', is certain. It was this knowledge which induced my faithful old 'treasure-seeking' guide Turdi to aid, about 1903, the attempt of a Khotan Bēg who tried to escape from trouble with the local Chinese administration by crossing the desert from the river's end to Shahyār—an adventure that ended badly for the Bēg as well as for honest Turdi.[10] For exploits of this shady kind, for the expeditions of robbers and others who had reason to avoid the highways, etc., this 'short cut' through the Taklamakān is always likely to have been a temptation. It is in this sense, I believe, that we have to interpret the popular tradition recorded in an old Turkī legendary, or Tadhkira, which pretends to describe the surprise attack made upon the infidels about Keriya by a band of Muslim warriors who came from the Tārīm by the route of the Keriya River.[11]

'Thieves' track' through Takla-makān.

After revisiting Tonguz-baste on the bed of 1901, now wholly abandoned by the river, and securing guides and additional labourers among the shepherds encountered, I proceeded once more to the ruined site of Kara-dong (Map No. 30. D. 2). I found that the report about additional ruins having come to light from among the dunes since my visit of 1901 was true, though their number and extent proved scanty. Little had changed at the great ruined quadrangle (Fig. 302), of which the portions not completely smothered by high sands had already been explored then.[12] But elsewhere, to the south and south-east where the ground was more open and the dunes less high, the latter had shifted their position to an extent which disclosed ruined dwellings not previously noticed. As the site-plan, Plate 55, shows, the area over which these remains could now be traced stretches from south to north for a distance of close on a mile, with a width of about one-third of a mile. Bare patches of eroded ground within this area showed plentiful pottery débris, and this was traceable also more thinly for about half a mile further south. Of special interest was the discovery, immediately on my return to the site, of two small irrigation canals found now cropping out from among the dunes. Each was traced at a number of points with a bearing from south to north and a clear width of $1\frac{1}{2}$ feet at the bottom. In conjunction with another new discovery, that

Return to *Kara-dong* Site.

[8] See above, p. 1239.

[9] Cf. Elias-Ross, *Tārīkh-i-Rashīdī*, p. 406. It is significant that he calls the lake *Kuk Naur*, i.e. Koko-nōr, and elsewhere reproduces the ancient Chinese fiction about the Huang Ho issuing from the same lake.

[10] Cf. *Desert Cathay*, i. p. 175.

[11] Cf. Grenard, *Mission Dutreuil de Rhins*, iii. p. 44.

I have thought at times that it might have been by some track leading to the terminal Keriya River and thence, perhaps, via Dandān-oilik that Fa-hsien and his companions starting from Kara-shahr or Korla 'managed to go straight forward in a south-west direction'; and 'in the course of a month and five days they succeeded in reaching Yü-t'ien (Khotan)'; cf. Legge, *Travels of Fâ-hien*, pp. 15 sq. 'They found the country uninhabited as they went along. The difficulties which they encountered in crossing the streams and on their route, and the sufferings which they endured, were unparalleled in human experience.'

The time recorded for the journey is remarkably short, and the description suggests the use of a very direct but exceptionally trying route. This would point to a track as above indicated after crossing the Inchike and Tārīm rivers. But in the absence of details the question cannot be settled.

[12] See *Ancient Khotan*, i. pp. 446 sqq.

of some dead trunks of cultivated poplars and fruit-trees, it proved that a small agricultural colony must have existed near the fortified station.

Excavation of ruined house.

The largest of the ruins, Ka. I (Figs 303, 304), was that of a good-sized dwelling with wattle and timber walls of a type practically identical with that found in the houses of the Niya Site. Its plan and internal arrangements (Plate 55) showed also very close resemblance to the latter. But here, as in the dwellings of Lou-lan, the timber used was exclusively of the wild poplar. The ruined house, in the main portion cleared,[13] was filled with 6 to 8 feet of sand. Owing to the immediate vicinity of a dune rising to 12 feet or more, some rooms to the east could not be excavated with the dozen men or so available. For the same reason no search could be made for any refuse-heaps outside which might have preserved archaeologically useful relics. The objects brought to light are described in the List below. Among them may be mentioned the wooden lock and key, Ka. I. 001–2; a dagger-like iron tool, Ka. I. 003; several amphorae, Ka. I. 0019 (Plate IV; Fig. 307); strong woollen fabrics of different kinds, Ka. I. 0014–16. All these closely resemble finds of the same kind made at the Niya and Lou-lan Sites. So does also the piece of an open-work wooden screen seen in Fig. 307. A rectangular wooden tablet, Ka. I. i. 001, is also of a type frequent among the wooden documents of a Niya Site, but has lost all traces of writing.

Other sand-buried dwellings.

At Ka. II were found the remains of a dwelling mainly of timber and wattle, badly destroyed by wind-erosion and subsequently overgrown by tamarisks, which had helped to form a sand-cone some 7 feet high above it, but were dead now. No objects were found on clearing this. The remains of a third ruined dwelling, Ka. III (Fig. 305), were also buried in a tamarisk-cone, which was, however, still living; the walls were built here of timber with plastered vertical bundles of rushes and reeds. Apart from a large pottery jar, a plain wooden plank-bed, $7\frac{1}{2}$ by $4\frac{1}{2}$ feet, was the only find here. Four more small dwellings, of which the position is marked in the site-plan, were found either completely eroded down to the foundation beams or else too deeply buried by the side of high dunes to permit of excavation with the limited number of men available.

Evidence of agricultural settlement.

Scanty as are the newly explored remains of the site and the objects found on it, they yet furnish definite evidence that a small agricultural settlement must have existed here far away in the desert, and not merely a small frontier guard-post, as I had been led previously to assume. With regard to the probable date, too, of the site, not merely as regards its character, the new observations permit us, I think, to form a clearer view. The resemblance in the construction of the houses and in the type of the objects of daily use found there is sufficiently close to justify the attribution of the ruins approximately to the period when the Niya and Lou-lan Sites were abandoned, i.e. the third–fourth century A.D. With this dating the two coins found close to Ka. I fully agree; they are both *Wu-chu* pieces, apparently of the second–third century A.D. The coins found on the occasion of my first visit, fourteen in all, were also either *Wu-chu* pieces or else uninscribed.[14] The few tiny bits of paper found in 1901 among the débris of the ruined quadrangle[15] raise no longer any chronological difficulty, since the discoveries at Lou-lan have proved that the use of paper by the side of wood as writing material had reached the Tārīm Basin by the middle of the third century, if not somewhat earlier.

Date indicated by Han coins.

Changes in Keriya River bed.

Even now we cannot determine the immediate cause which may have led to the abandonment of the small settlement. But my previous remarks as to the possibility of this having been caused by a change in the course of the river which deprived the site of its water-supply[16] have since received striking illustration by what I was able to observe myself on my renewed visit. The river, which in 1901 was fully eleven miles away from Kara-dong at its nearest point, flowed seven

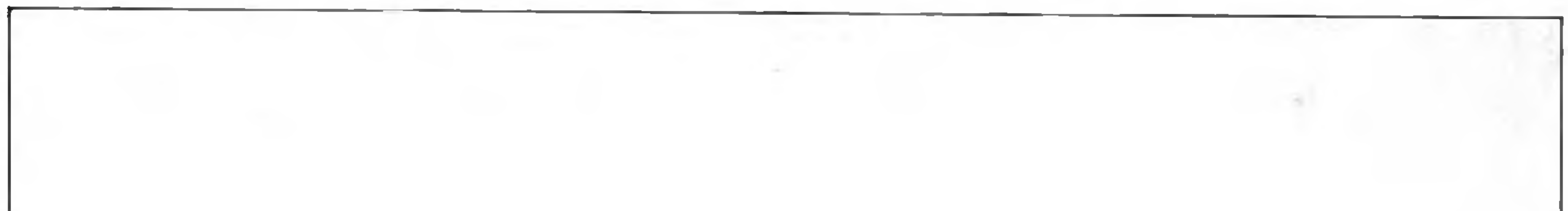
[13] Marked with the broad arrow in plan, Pl. 55.

[14] Cf. *Ancient Khotan*, i. p. 447.

[15] See *Ancient Khotan*.

[16] Cf. *ibid.*, i. p. 451.

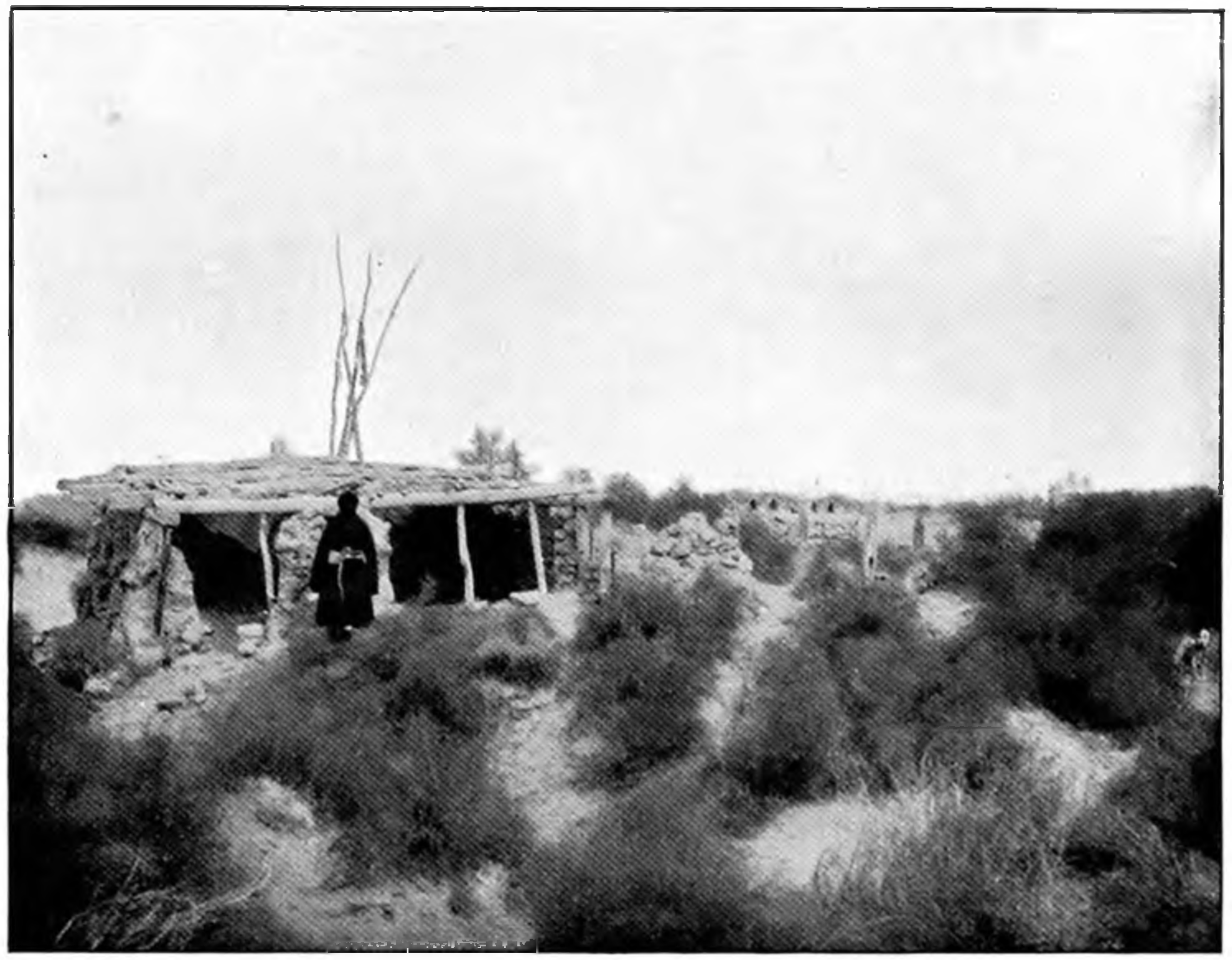
303. RUINED DWELLING Ka. I, KARA-DONG SITE, SEEN FROM NORTH-EAST BEFORE EXCAVATION.



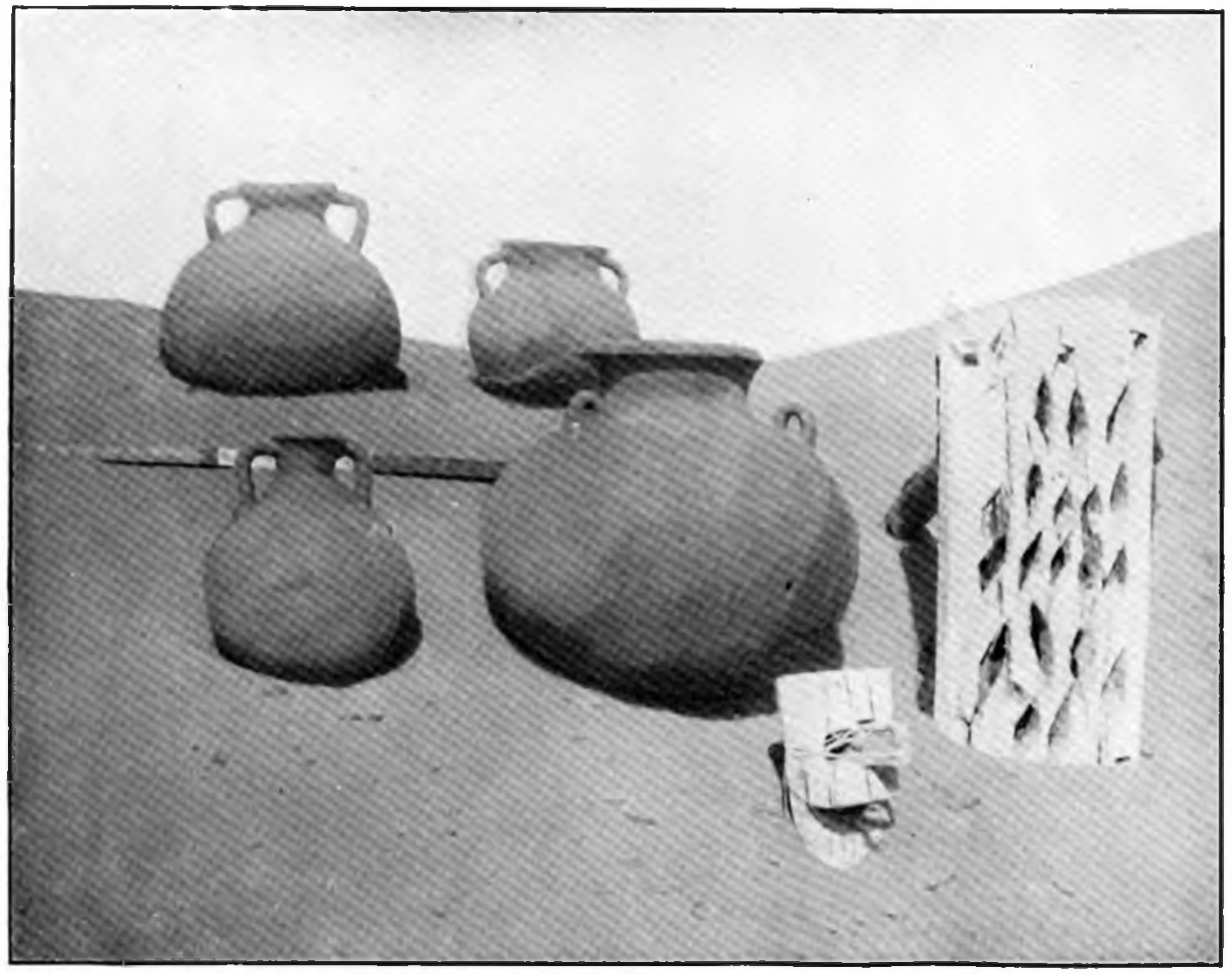
304. RUINED DWELLING Ka. I, KARA-DONG SITE, SEEN FROM WEST DURING EXCAVATION.

P 1242

305 RUINED DWELLING Ka. III, BURIED IN TAMARISK-CONE, KARA-DONG SITE.



306. RUINED MOSQUE IN DESERTED VILLAGE OF 'OLD DOMOKO'.



307. ANCIENT JARS, WOODEN LOCK, AND SCREEN EXCAVATED FROM RUINED DWELLING, Ka. I, KARA-DONG SITE.

308. RUINED HOMESTEAD OVERRUN BY DRIFT SAND AND TAMARISK SCRUB, 'OLD DOMOKO'.

years later within three miles of it, in what obviously is but an extension of the old Toldāma bed already noted in 1901. Of the difficulties as regards irrigation which even a small change in the course of a river may cause where there is not adequate labour to cope with it, I have had repeated occasion to speak before.[17]

OBJECTS EXCAVATED OR FOUND AT KARA-DONG SITE

Ka. 001. Bronze wire bent almost in circle; each end flattened and pierced for attachment. Prob. handle to vessel (?). Length $6\frac{1}{4}$", diam. of wire $\frac{1}{8}$".

Ka. 002. Bronze wire bent almost into ring. Diam. of ring $\frac{5}{8}" \times \frac{1}{2}"$, of wire $\frac{1}{16}$".

Ka. 003. Fr. of pottery, from jug handle. Straight, with edges rounded; one side flat; the other convex. Clay dark grey with white granulations. On convex side is impression of intaglio seal, showing a horse (?) to R., prancing with tail upwaved; cf. Rhodian wine amphorae. $1\frac{1}{4}" \times 1\frac{1}{4}" \times \frac{3}{8}"$. Found 19. ii. 08.

Ka. I. 001. Wooden key for lock of type Kha. v. 006, but of unusually large size. Five peg-holes, and one not completed near handle; two pegs remaining. Notch cut in each side at end. Handle has raised shoulder, narrows to waist, and swells out again to head, which is pierced for suspension. Hard and well-preserved. Length $11\frac{7}{8}$", width (of key) $1\frac{1}{4}$".

Ka. I. 002. a-b. Wooden bolt and tumbler-block for lock of type Kha. v. 006; belonging to each other. Four holes, disposed .˙.˙ Bolt (*a*) shows groove for check-pin, and tumbler-block (*b*) retains one peg. Found in door. Good condition. (*a*) $4\frac{1}{2}" \times 1\frac{1}{2}" \times \frac{1}{2}"$; (*b*) $2\frac{1}{8}"$ to $1\frac{13}{16}" \times 1\frac{3}{8}" \times \frac{5}{8}"$.

Ka. I. 003. Iron weapon or tool. Leaf-shaped dagger blade, two-edged, much corroded and point broken. End of tang fixed in cylindrical wooden handle (not orig. one), which swells out at ends to give firmer grip. Round end near blade is scratched chevron orn. of 5–6 lines. Blade $3\frac{1}{2}" \times 1\frac{3}{16}"$ (gr. width); handle $4\frac{3}{8}" \times \frac{11}{16}"$ to 1" (diam.).

Ka. I. 004. Wooden weaving stick (?) as L.B. 0011. Long end broken. Length $7\frac{1}{2}$", diam. $\frac{3}{8}$" to $\frac{1}{8}$".

Ka. I. 005-6. Two wooden 'dead-eyes', as T. XIV. a. 004; 005, V-shaped; 006, large U-shaped, worn by friction of rope on inner side of apex. Apex to base, *005* $1\frac{7}{8}$", *006* 3"; across base, *005* $2\frac{1}{4}$", *006* $3\frac{1}{2}$".

Ka. I. 007. Wooden peg, prob. for fastening to end of rope to tighten knot. Groove in centre. Tapers from centre and spreads out again at ends. Length $2\frac{3}{4}$", diam. $\frac{9}{16}$" to $\frac{5}{16}$".

Ka. I. 008. Wooden crutch-like object, resembling N. XIII. i. 002; L.A. I. iv. 009. Cross-piece round in section. $1\frac{1}{4}$" from end, stem is shaved down to groove, as seen at break of N. XIII. i. 002 and complete in L.A. I. iv. 009. Length of straight piece $5\frac{1}{4}$", of cross-piece $2\frac{7}{8}$"; diam. $\frac{3}{8}$".

Ka. I. 0010. Terra-cotta spinning-whorl; red clay, dome-shaped, pierced vertically. Up sides run four lines flanked on each side by a row of incised pear-shaped dots. H. $\frac{3}{4}$", diam. $1\frac{3}{16}$".

Ka. I. 0011. Section of conical piece of gourd (?). H. $\frac{1}{2}$", diam. $\frac{3}{4}$" to 1".

Ka. I. 0012. Wooden stick with bark, ends bevelled. Across one side are cut a succession of four grooves semi-circular in section *c.* 1" wide. Use uncertain, but perhaps tally. Length $7\frac{1}{4}$", diam. $\frac{3}{4}$".

Ka. I. 0013. Wooden comb like L.A. VIII. 001; broken. H. $3\frac{5}{16}$", width *c.* $2\frac{1}{2}$", length of teeth $1\frac{5}{16}$", five teeth to 1".

Ka. I. 0014. Fabric frs. including two pieces of strong dark brown woollen (?) fabric, very firmly woven, weft close-pressed concealing warp; two frs. buff cotton (?) fabric, one fine, the other coarse; one fr. thick red silk (?) fabric, plain weave; one fr. fine yellow cotton (?) fabric; and one fr. of fine twill woollen fabric printed with repeating pattern of dot rosettes alternating with plain round spots, ground light red, pattern buff. Gr. M. (dark brown fabric) $9" \times 7"$. Printed fr. *c.* $1\frac{1}{2}$" sq.

Ka. I. 0015. Misc. frs. of string; including goat's-hair (?) three-strand cord $\frac{1}{4}$" in diam.; tangle of three-ply fine string $\frac{1}{16}$" in diam. (as used for warp of 0016), and strip of buff felt twisted into cord. Gr. length 11".

Ka. I. 0016. Pieces of thick felt-lined carpet or coat (?) of buff woollen and goat's-hair fabric. Frs. of two different materials remain: (*a*) has thick warp of two-strand goat's-hair string, and much finer woollen weft, close-pressed so that it hides warp and gives ribbed surface on each side; weave very firm and regular; (*b*) has same kind of weft on twisted woollen warp, and weave is same, but into the fabric, in rows $\frac{3}{4}$" apart, are knotted ends of buff woollen yarn leaving ragged 1" pile on back; cf. L.A. I. ii. 001.

Three pieces of (*b*) remain, one sewn to (*a*). On front of both was layer of buff and brown felt (of which patches remain), sewn on with string. Many holes. Gr. fr. *c.* $1' 6" \times 9"$.

Ka. I. 0017. Fabric frs. including three pieces of coarse goat's-hair fabric, with single twisted weft on warp of two-

[17] See e.g. *Ancient Khotan*, i. pp. 419 sq.; above, p. 275; *Third Journey of Exploration*, *Geogr. Journal*, xlviii. p. 116.

ply goat's-hair string, with layer of buff felt sewn over; and ragged fr. of buff cotton (?) fabric, plain weave, warp and weft threads running in pairs. Gr. M. 1′ 2″ × 9″.

Ka. I. 0018. Fr. of pottery; coarse hard brick-red clay. Hand-made. Gr. M. $1\frac{7}{8}$″.

Ka. I. 0019. Pottery amphora, intact. On small ring base is globular body, from which rises short round neck with slightly everted rim. On shoulders stand two perpendicular handles, which turn in at right angles to join neck just below rim. Hand-made; coarse gritty red clay; no orn. H. of whole $10\frac{3}{4}$″, of neck $2\frac{1}{2}$″; gr. diam. *c.* 8″, of neck 2″ to $2\frac{3}{4}$″. Pl. IV.

Ka. I. i. 001. Rectang. wooden tablet with hole at one corner. Traces of pink paint, but no writing. $6\frac{7}{8}$″ × $2\frac{1}{2}$″ × $\frac{1}{8}$″ to $\frac{1}{4}$″

Ka. III. 001–2. Two specimen frs. of roughly carved wooden panel; much warped and soft. *001*, $7\frac{1}{2}$″ × 2″ × 1″; *002*, $7\frac{1}{4}$″ × $1\frac{3}{4}$″ × *c.* $1\frac{1}{2}$″.

CHAPTER XXXI

RUINED SITES EAST AND NORTH OF KHOTAN

Section I.—THE SITE OF FARHĀD-BĒG-YAILAKI

A reconnaissance which R. B. Lāl Singh had, during my work at Kara-dong, carried out in the desert north and north-west revealed no traces of ancient occupation beyond that site. Nor was information about old remains further down obtainable from any of the shepherds and hunters of wild camels whom we could find. So leaving Kara-dong on February 22, I moved up the river in order to meet as early as possible the party of my old 'treasure-seekers', for whose dispatch from Khotan I had arranged through Sir G. Macartney's kind help before leaving Kuchā. Following the route familiar since 1901, I was able to ascertain that the river's course above Yoghan-kum showed but very little change, a fact fully accounted for by the high 'Dawāns' which accompany it on both sides. On February 25 this concentration across a vast space of desert was successfully secured when a dozen familiar 'Taklamakānchis' under old Turdi's nephew Rōze joined me at Kochkar-ōghil (Map No. 31. c. 1).

Move up Keriya River.

The information they brought enabled me to settle my plans and move straight to the desert belt north of the Domoko oasis. There they had succeeded in tracking, hidden away amidst high ridges of dunes and belts of tamarisk-cones, an extensive but scattered series of ruined dwellings and Buddhist shrines which had escaped us in 1906, while at work at Khādalik, some 10 miles to the south-west. Of the very deceptive nature of the ground surrounding these remains I had a striking experience when, after moving from the Keriya River, as in 1901, to the terminal marshes of the Shīvul stream [1] (Map No. 31. B. 4), we made our way westwards across the sandy jungle tract to where the ruins were declared to be situated near the end of the Domoko-yār. Though the route rightly taken with the assistance of our previous surveys had brought us at Camp 341 (Map No. 31. A. 4) to within 2 miles of the principal portion of the site, my experienced guides, not having before approached it from this side, failed to locate the ruins, scattered as they are in the maze of close-set tamarisk-cones.[2] Not having found water we were obliged to move south-west, where the position was cleared up on reaching the site of 'Old Domoko'.

Deceptive ground north of *Domoko.*

In *Ancient Khotan* I have already had occasion to discuss the very instructive archaeological evidence which the ruins of this extensive settlement, abandoned about 1840, furnish as to similar changes in the more distant past of this tract and about the peculiar hydrographic causes underlying them.[3] So there is no need to refer to it again. The photographs, reproduced in Figs. 306, 308, of two of these last-century ruins may help to illustrate the initial stage through which the homesteads of ancient settlements abandoned to the desert, such as the Niya and Endere Sites, are bound to have passed in their time. The drift-sand was still very low, and wind-erosion had nowhere progressed deeper than about 6 to 8 inches. But there was an interesting change since 1901 to note. Within a mile of the southern end of the deserted village area I came upon newly

Remains of 'Old Domoko'.

[1] Cf. *Ancient Khotan*, i. pp. 452 sq.

[2] For a closely corresponding experience which my traverse of the ground further south in March, 1901, furnished, see *Ancient Khotan*, i. p. 453.

[3] Cf. *ibid.*, i. pp. 458 sq.; also above, pp. 201 sqq.

Renewed cultivation.

laid-out fields which a small channel, provisionally dug, had just irrigated. It was said to be surplus water from the Domoko-yār, available after satisfying the needs of Malak-ālagan, the new colony first visited in 1901. Thus I had ocular proof that the fresh extension of Domoko cultivation northward, of which I have tried above to explain the reason and special interest,[4] was still in steady progress.

Site of *Farhād-Bēg-yailaki.*

After securing at Malak-ālagan, the first permanently inhabited place reached since our start from Shahyār, an adequate number of labourers, I proceeded on March 2 to the site of Farhād-Bēg-yailaki, which my guides had failed to locate before when coming from the east. Its remains proved to be scattered over a relatively extensive area, stretching, as the site-plan, Plate 56, shows, for about $4\frac{1}{2}$ miles from south-east to north-west and with its nearest point about 6 miles north of the central homesteads of Malak-ālagan. This area, as seen from Map No. 31. A. 4, lies between two well-marked old flood beds which the stream now descending in the Domoko-yār was said to have reached in years of heavy floods of *ak-su* from the mountains, before the opening of the new colony below Kara-kīr caused these to be diverted north-eastwards for the cultivation of Achma.[5] A tiny watercourse, carrying some 6 cubic feet per second, was then taking the surplus of the water from the springs of the Domoko-yār, not needed by Malak-ālagan cultivation, down towards the southern end of the site. Before the end of my stay it had managed to make its way between the tamarisk-covered sand hillocks even close to ruin I. But this was the season when the flow from springs (*kara-su*) is amplest, and a little later on the stream was said to dry up at about 2 miles from Malak-ālagan. The temporary overflow suffices to produce ample growth of reeds and scrub along its course. This extends also for a mile or so beyond a conspicuous high tamarisk-cone, known from a rough signal-post on its top as *Farhād-Bēgning īlesi*, where my Camp 343 was pitched. The grazing around is called *Farhād-Bēg-yailaki* after a local Bēg who in Yāqūb Bēg's time used it also for getting saltpetre from the neighbouring ruins.

First inspection of ruins.

A first rapid inspection of the ruins sufficed to show me that they had all suffered badly through this and earlier exploitation by villagers and wood-cutters such as the vicinity of 'Old Domoko' and other inhabited ground rendered easy. The portions of the structures that had originally been above ground were nowhere apparently covered by more than 2 or 3 feet of sand. Yet, on the other hand, I noticed with satisfaction that moisture could not have caused so much damage to the remains as might have been feared otherwise from the present close approach of water. Almost all the ruined structures traceable were found to occupy erosion terraces, rising up to about 15 feet above the adjoining ground-level. This particular feature of the site seemed to suggest from the first that these ruins of what manifestly were ancient dwellings and shrines, resembling those of Dandān-oilik and Khādalik, might yet possibly be of somewhat earlier origin. I shall have occasion below to mention other indications pointing in the same direction.

Wall construction in dwellings.

The construction of the walls, which was easily recognized as being mainly in timber and plastered wattle or else in sun-dried bricks, showed no clearly datable features. The wattle was made either of horizontal reed-bundles or else of thin tamarisk branches placed vertically and secured to the timber framework by cross-pieces. Besides these methods, construction with mere plastered rush walls and masonry of hard and more or less flat clay clumps was also represented. That the number of ruined structures was much smaller than Badruddīn Khan's report had suggested was a disappointing observation, made subsequently elsewhere also. Its explanation lay in the fact that my worthy friend, who never visited any old site himself, had put a wrong interpretation on the statements of the 'treasure-seekers' he sent out to search. They meant rooms, not houses, when reporting to him how many *oi* they had traced in a particular locality.

[4] See above, pp. 203 sqq.

[5] Cf. *Ancient Khotan*, i. p. 468.

The first ruin cleared, F. I, comprised a series of rooms mostly of small size, grouped in several courts round a still clearly recognizable square tank (see plan, Plate 57). The walls, whether of timber and wattle or of brick masonry, were found broken down to within a foot or two of the ground. But outside the area occupied by the house lines of fenced enclosures and the remains of an orchard with trees planted in regular rows could be traced quite clearly. Fireplaces and sitting-platforms by their side, built of mud plaster, survived in some rooms. In one of these, marked *a*, there was found a well-preserved wooden tablet measuring 12 by 4 inches, bearing on each side five lines of Sanskrit in clear Brāhmī script (F. I. a. 1, Plate CLI). In the small oblong cella, *b*, finds of a few appliqué relievo fragments in stucco, like F. I. b. 006–7, and of the interesting little fresco piece, F. I. b. 008, made it possible to recognize what seems to have been a domestic shrine. Small fragments of ornaments in bronze paste, etc., also turned up in the débris. Objects of personal or domestic use found elsewhere in this ruin (F. I. 001–10) included *inter alia* a toy bow and arrow, a bag made of leopard's skin, and whisk-brooms of the type first found at Dandān-oilik. Finds in ruin F. I.

F. II was a ruin comprising a badly eroded shrine of larger size with dwelling quarters, situated about half a mile to the west of F. I on a large and conspicuous erosion terrace. The dwelling, arranged in two wings set at right angles, proved to be filled with drift-sand to a height of over 6 feet and to retain a number of interesting relics. Fig. 310 shows its corner portion as it appeared at the commencement of excavation. In room i, there seen in the centre, the presence of an image niche set into the south-west wall, but opening to the outside, was a peculiar feature. There remained of it, at a height of about 4½ feet from the ground, the decorated wooden panel, F. II. i. 005 (Plate XVII), 3½ feet long, forming the plinth for a stucco image base on which remains of two feet standing on a lotus in relievo could still be distinguished. The ends of the plinth had grooves for fixing side panels and also two sockets in which the projecting ends of the door-folds once turned. There was a wooden platform behind, measuring 3½ by 2½ feet, on which the stucco base and image once rested. Curiously enough there were found no supports for the platform, which rested merely on drift-sand. Evidently the posts or frame of wood once supporting it had been removed after abandonment, when the building had already been invaded by sand but was still accessible. A mass of ex-voto fabrics and Brāhmī manuscript remains eaten by mice survived under the left foot of the image (F. II. i. 001). Remains of small shrine in F. II.

Within the room i there were found a number of wooden tablets, both of oblong and of wedge shape, some well-preserved, some broken. Their writing, in Brāhmī of the Gupta type, looked to me older than that of Dandān-oilik documents; their text seemed to be in the old Khotanese language.[5a] Of other objects found there I may mention as of special interest two clay seal impressions from gems, which judging from their shape and size are likely to have been either inserted in sockets of wooden documents of the Niya Site type or else appended to the end of wedge tablets after the fashion illustrated by N. XV. 71.[6] The impression of the convex gem, F. II. i. 003 (Plate V), shows a hunting scene, composed under unmistakably classical influence, the figure of the horseman being in an attitude which resembles that in 'Alexander's hunt' scenes. Late classical influence is recognizable also in the impression from a smaller intaglio, F. II. i. 004 (Plate V), showing a carefully cut female bust. Both seals may have been imported from Western Asia, as seems likely, too, in the case of many of the quasi-classical gems from Yōtkan, shown in Plate V. The fragments of decorated pottery, including the neck and forepart of a winged-horse handle, F. II. i. 6, and a grotesque appliqué head of the 'Silenus' type, F. II. i. 002, are of special interest because they show motifs plentifully represented among the terra-cottas of Yōtkan. They would throw light on the chronology of the latter finds if once the approximate date of abandonment of Inscribed wooden tablets. Clay impressions of gems.

[5a] For a list, cf. Hoernle, Appendix *F*.

[6] See *Ancient Khotan*, ii. Pl. C.

the Farhād-Bēg-yailaki Site were determined. I may add that a decorated wooden comb found at this ruin, F. II. 001, is also of a Western type.

Open court of F. II.

In clearing the open hall or court immediately adjoining room i on the south-west (Fig. 317) we came upon a wooden boarding, $4\frac{1}{2}$ feet square, with posts at the corners. Cross-bars of wood between these carried a rough piece of matting, plastered on the upper surface, at a height of about 2 feet from the floor. The purpose of this boarding remains uncertain, no other finds having been made within or near it. But it curiously recalled the wooden boarding found within the large refuse-heap of N. XIV at the Niya Site and once used to store fodder before it became a dustbin.[7] In the end room, ii, of the same wing, the only object discovered was the well-preserved wooden double-bracket, F. II. ii. 01 (Plate XVII). Its shape and well-carved ornamentation are of special interest because, on the one hand, they show close descent from the carved double-brackets found at the Niya Site,[8] and, on the other, clearly indicate a transition towards the double-bracket brought to light at Khādalik.[9] I have already had occasion, when discussing the stucco pilasters and cantilevers of the Mīrān temple M. II, to trace step by step the development which this architectural motif has undergone in the art of the Tārīm Basin since its original model was borrowed from the Persepolitan columns and cantilevers of Gandhāra sculpture.[10] Referring for a detailed description of this fine piece of wood-carving to the List below, it will suffice to point out that in conjunction with collateral evidence it has its value for the dating of the Farhād-Bēg-yailaki Site. I need scarcely add that this carving, like all the other timber used in the structures of this site, is of the wood of the cultivated poplar.

Carved double-bracket.

Temple cella F. II. iii.

The rooms adjoining i in the north-east wing contained well-preserved fireplaces and sitting-platforms by their side, but furnished no objects. Beyond them to the east and on a slightly higher level stood a temple cella, iii, 18 by 14 feet within, enclosed on three sides by a circumambulatory passage about 6 feet wide. The sand covering it was less than 3 feet deep, and consequently what remained of the plastered walls retained only the scantiest traces of their original fresco decoration. Of the stucco relievos once adorning the cella only fragments survived, which mostly appeared to have belonged to one vesica. The largest piece, F. II. iii. 001. a (Plate CXXXIX), shows well-modelled small appliqué figures of seated Buddhas within a floral border which in its motifs differs from the corresponding stucco wall ornaments both of Rawak and of Dandān-oilik. The square image base within the cella was broken to within a foot or so of the ground, and had evidently been burrowed into for 'treasure'. But close behind it there were discovered two painted panels, F. II. iii. 1, 2, and along the foot of the adjoining cella wall five more.

Painted panels.

They all lay obviously in the place where they had been deposited as votive offerings by the last worshippers, and show only too clearly the damage they had undergone through corroding sand and exposure before they were finally buried. A detailed description of them all will be found in the List below. Two among them, F. II. iii. 5, 6, show Buddha figures of rough workmanship. But others, in spite of poor preservation, are of artistic interest. Thus in F. II. iii. 2 (Plate CXXV) we see the very well-proportioned and gracefully posed figure of a standing Bodhisattva (?), with designs of seated Buddhas, a bird, etc., painted on the nude portions of the body. F. II. iii. 002 (Plate CXXV), 17 inches high, displays on one side the richly draped figure of a standing Buddha with a kneeling donor at his feet. The heads of this Buddha and the Bodhisattva in F. II. iii. 2 have features of a very pronounced Indian type. The same is the case also with the elaborately dressed armed figure seen on the reverse of F. II. iii. 002 (Plate CXXV) riding a camel. His mount

[7] Cf. above, pp. 217 sq.

[8] See N. XII. i. 2; XXVI. iii. 1, Pl. XVIII; also *Ancient Khotan*, ii. Pl. LXIX, N. XX. 02, 03.

[9] See Kha. v. 003. a, Pl. XVII.

[10] Cf. above, pp. 491 sq.

and the pose of the right hand holding a patera or cup leave no doubt that the same sacred figure is represented which was first met with on two of the painted panels discovered by me at Dandān-oilik.[11] The legend in which this saintly personage figured still awaits identification.

Disposition of quarters in F. III.

The position of the temple close to the living-quarters of F. II suggests that the latter were those of a small monastery, and the same was probably the case also at the ruins of F. III. They were situated on a small erosion terrace, about a quarter of a mile to the north-west of F. I. The disposition of the rooms as seen in the plan, Plate 57, showed a close resemblance to that at F. II. Here, too, the quarters were placed in two wings, adjoining at right angles, with the temple standing apart to the north-east. In both places the large room, at the south-west corner of the court, but with no entrance from it, is likely to have been intended as a guest-room for visitors. An exactly corresponding arrangement is regularly adopted for the *mihmān-khānas* of modern houses in Chinese Turkestān so as to allow guests to enter their quarters without passing through the rest of the house.

Fresco and other remains in F. III.

The temple, i, stood here also on ground some feet higher than the rest of the ruin, and had in consequence but a few feet of sand to protect it. As seen in Fig. 309, the walls of both cella and enclosing passage were broken from a height of a few feet above the floor. Those of the cella retained in the south-east corner portions of a well-painted fresco dado, showing on dark red ground a valance-like design with pendent triangles and tassels between them. A square base in the centre of the cella and four hexagonal bases in the corners had once served for the accommodation of statues. In the porch of the cella the lower portions of four stucco images survived (Fig. 309). The figure to the right of the cella entrance, evidently a Lokapāla, stood on a crouching demon of which the grotesque head, F. III. i. 003, was recovered, though damaged on the surface. The fragment of a paper manuscript in Brāhmī was found close to the inner wall of the cella, and on its floor a *Wu-chu* coin. The chronological value of this coin find and of the evidence furnished by the other Chinese coins from the site, all pre-T'ang pieces, will be discussed below. The well-built quarters were found completely empty. But in the room ii, which may have served as the place of assembly of the little 'Saṃgha', a large wooden tablet inscribed in Brāhmī was recovered. A detached room to the west yielded the fragment, F. III. iii. 001, of a small statuette delicately carved in wood.

'Tati' areas.

To the north-west of the groups of ruins so far described small 'Tati' areas strewn with ancient pottery débris could be traced for a distance of close on 3 miles, on patches of wind-eroded ground interspersed between sand ridges and belts of close-set tamarisk-cones. The considerable extent of the area once occupied by dwellings, probably built with mere mud walls and hence completely decayed, is thus clearly marked. The winding course of an ancient canal, now raised dyke-like 8 feet and more above the eroded ground on either side, could also be followed quite clearly for about a quarter of a mile from near F. II. In one or two places I came upon indications of fields cultivated at no very distant period. They were found on patches of open ground lowered by wind-erosion, to which water may have been temporarily brought while 'Old Domoko' was inhabited or even later. Structural remains of antiquity were found only near three of the small 'Tatis', but it is probable that others may lie hidden under tamarisk-cones or accumulations of dunes. At F. IV (Plate 57), about 1½ miles from F. I, the much-eroded remains of some quarters yielded no finds; but from a large refuse-heap near by small objects of domestic use were recovered, including the 'female' portion of a fire-stick, F. IV. 004, and an appliqué grotesque ornament in terra-cotta of a type familiar from Yōtkan, F. IV. 002. Two detached rooms cleared at F. V yielded nothing.

More interesting was the result which attended the clearing of a small mass of masonry seen to

[11] See *Ancient Khotan*, ii. Pl. LIX, D. VII. 5; Pl. LXII, D. X. 5; also i. pp. 261, 278.

Small Stūpa of *Rawak* type.

emerge with its top from the side of a dead tamarisk-cone. Its excavation brought to light a small Stūpa base (Fig. 311), which in its ground-plan (Plate 58) is an almost exact reproduction of that discovered in 1901 at the great Rawak Vihāra.[12] Here, too, we find the characteristic projections on each of the four arms of the symmetrically developed cross which the ground-plan superimposed on a square; but owing to the much-reduced dimensions—each of the four arms, as measured from the centre of the base, extends only to about 7 feet—the flights of stairs which these projections were originally meant to carry are not indicated. But, perhaps, the small cubes flanking on either side the foot of these projections are intended to mark side-walls for the lowest portion of the stairs. The photograph Fig. 311, as well as the section in Plate 58, shows that the proportion between the two extant stories of the base is not likely to have differed much from that in the Rawak Stūpa. But the elevation of the whole base as compared with the dimensions of the ground-plan is much greater here than at Rawak. The strong inward slant of the faces of these stories is a special feature not met with elsewhere, though the projecting mouldings which separate the two stories are found also at Rawak.[13] Of the dome nothing remained. The base was found to have been burrowed into from the west for 'treasure', evidently at an early date. A number of still smaller Stūpas, from 2 to 3 feet square at their lowest base, surrounded the one just described. None of them rose to more than 4 feet in height, and all were broken above the commencement of the second story of their bases.

Sealing from Hellenistic intaglio.

To the south-east and east of F. I the ground was more eroded and open, and here within a distance of about three-quarters of a mile remains of several groups of ruined structures could be traced. They all had suffered badly and had but little sand left to protect them. At F. VII the area once occupied by two dwellings was searched without any finds being made, apart from some small fragments of decorated pottery, etc. But on eroded ground close to the north of it there was picked up on the surface the clay sealing F. VII. 002 (Plate V), with a very interesting impression from a large oval intaglio. On the left is Ganymede reclining on a rock and feeding Zeus' Eagle on the right. The group shows very fine composition and the execution is good Hellenistic work, the whole being distinctly superior to any gem recovered by me in the Khotan region, whether in original or in clay impression. The rectangular shape of the clay sealing proves that it was originally inserted in the seal socket of a wooden document of the Niya Site type, and its hardness suggests that it had been subsequently fired by accident. The chronological indication supplied by this sealing will be considered presently.

Ruined structure F. VIII.

F. VIII is a curious ruined structure (Plate 58), rising on a well-marked terrace about a quarter of a mile to the north-east. Broad depressions near it have been eroded by wind action to a depth of 12–15 feet. Apart from some detached walls of clay and timber and wattle, the relation of which could no longer be ascertained, there remains a solid rectangular platform of masonry, about 37 feet by 35, showing plastered faces slanting inwards. On the south-east, where the platform still stands to a height of about 7 feet, a narrow flight of steps flanked by walls leads up to it in the centre. On the same face are remains of a wall apparently added later to form a narrow terrace in front. The purpose of the platform and of the structure it may have once borne remains doubtful. The small relievo fragment in stucco, F. VIII. 001, was the only object found here. A group of dead Terek trunks close by to the east seemed to mark a small arbour, while about two furlongs off to the south a large orchard, with rows of dead Jigda and other fruit-trees planted quincunx fashion, was still clearly traceable. To the west of F. VIII I found the well-marked line of a cart-road emerging in several places on the hard loess ground where this was left bare between the dunes. As the ruts

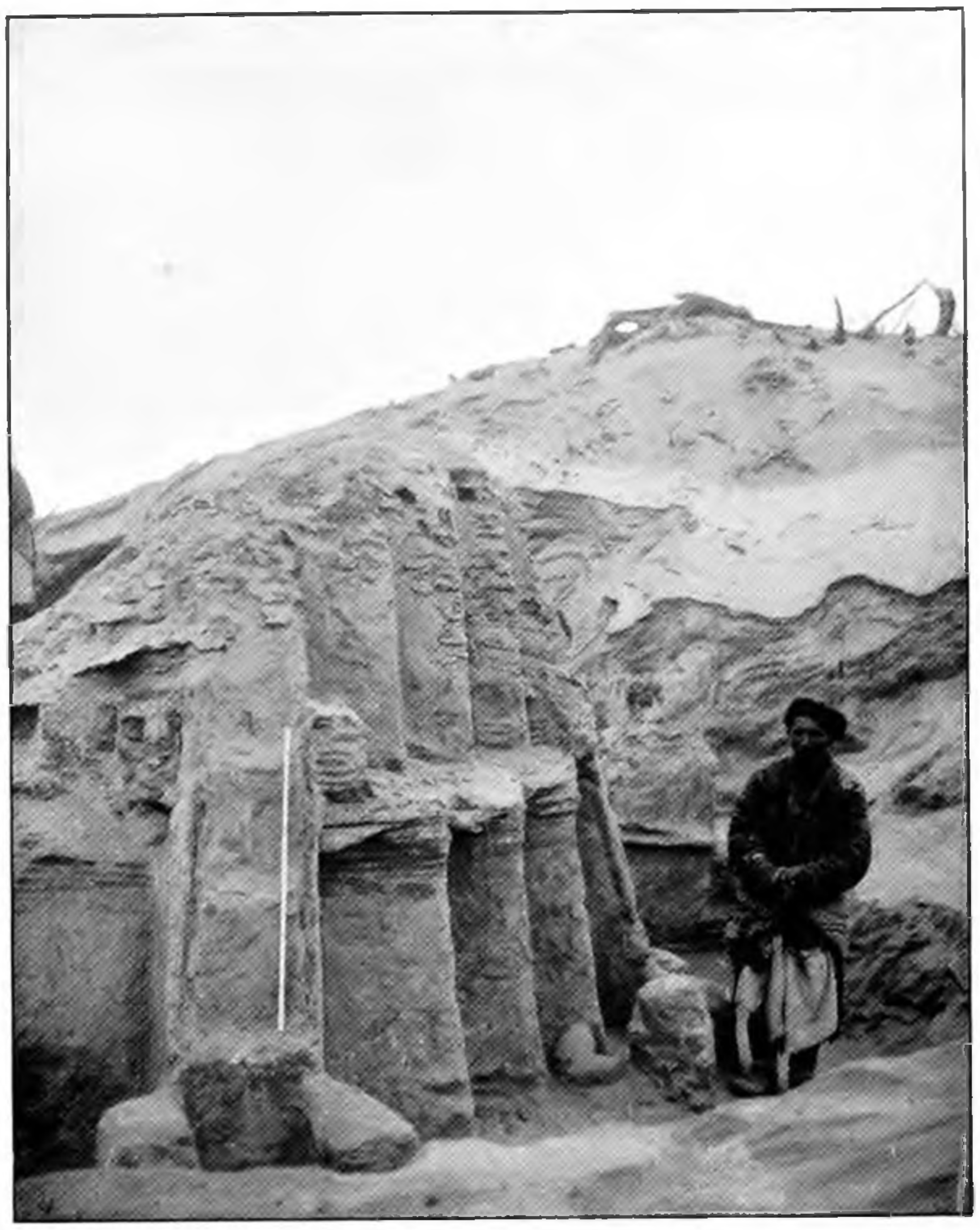
Dead arbour and orchard.

[12] See *Ancient Khotan*, i. pp. 485 sq.; ii. Pls. XXXIX, XL. The measuring-rod seen in Fig. 311 marks 39 inches. See also the miniature Stūpa model, So. A. 006, Pl. CXXXIX.

[13] See the sketch above, p. 128.

309. REMAINS OF RUINED TEMPLE CELLA AND PORCH, F. III. iii, FARHĀD-BĒG-YAILAKI SITE, SEEN FROM SOUTH-WEST.

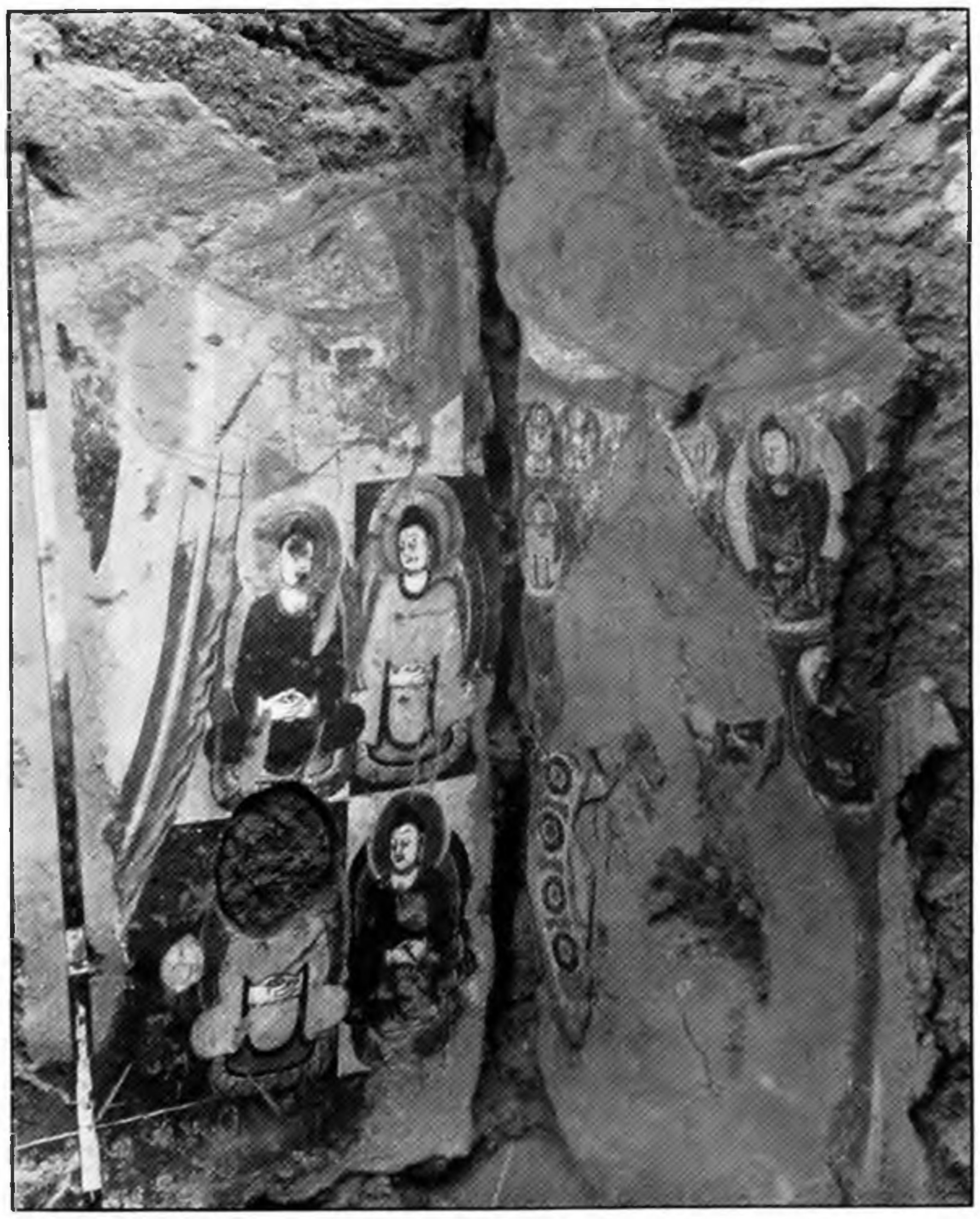
310. SAND-FILLED ROOMS AT NORTH CORNER OF RUINED BUILDING F. II, FARHAD-BĒG-YAILAKI SITE, SEEN FROM SOUTH-WEST.



311. RUINED STŪPA BASE, F. VI, FARHĀD-BĒG-YAILAKI, SEEN FROM EAST.

312. REMAINS OF STUCCO RELIEVO AND WALL PAINTINGS TO S.W. OF ENTRANCE OF RUINED SHRINE F. XII, FARHĀD-BĒG-YAILAKI.

313. REMAINS OF STUCCO RELIEVO AND WALL PAINTING ON N.W. WALL OF RUINED SHRINE F. XII, FARHĀD-BĒG-YAILAKI SITE.



314. REMAINS OF TEMPERA PAINTINGS AT SOUTH CORNER OF RUINED SHRINE F. XII, FARHĀD-BĒG-YAILAKI.

led up straight to the edges of deeply eroded trenches, it is obvious that the track must be old and perhaps dating back to the time when the site was abandoned.

Ruined structures to south.

At F. IX the clearing of a dwelling which contained several rooms built with plastered rush-walls yielded only a few household implements of wood and clay. To the south-east of it small fragments of relievos, all in hard white stucco, were the only traces left of a completely destroyed shrine. About three-quarters of a mile due south from F. VIII there survived the wall foundations of a shrine, consisting of a cella and passage, the walls of the latter built of clay. Behind the central statue base in the cella was found a painted panel, F. XI. i. 001, almost completely effaced, and the small fragment of a Brāhmī manuscript leaf. Among the remains of an adjoining monastic dwelling the clay walls of a large hall were still distinguishable, besides some smaller quarters. Still further to the south there was found, half-embedded in a dune near a 'Tati' area, a small timber and wattle structure, from which the plain haematite seal F. x. 001 was recovered.

Section II.—THE SHRINE F. XII AND THE CHRONOLOGY OF THE SITE

Temple on tamarisk-cone.

The shrine F. XII, remarkable both for its position and for its remains, still has to be described. It was situated about half a mile to the south of F. X on the south-eastern slope of a high tamarisk-covered sand-cone, seen in Fig. 315. Both to the west and to the south of this there stretch ridges of close-set tamarisk-cones, while beyond these the dying streamlet from the Domoko-yār meanders across strips of level ground thickly covered with scrub and reeds. The little temple must have been built when the sand-cone was much lower; for its floor, as seen in the plan, Plate 58, stood 20 feet above the level marked by an ancient rush fence traceable for about 24 feet near the south foot of the cone. The top of the latter now rose fully 18 feet above the temple floor. This height of sand had accumulated over the shrine since it was abandoned, and had helped partially to preserve it. Its walls, fully 4½ feet thick and built of fairly uniform flat lumps of clay, still rose to a height of about 6 feet on the north-west; elsewhere they were broken from about 4 feet. The little cella within measured just over 8 feet by 10. 'Treasure-seekers' had made an entrance into it from the east corner, and small fragments from stucco relievos and the cut-out head of a frescoed figure on the south-east wall (Fig. 314) attested their recent burrowing. But the sand, filling the cella and pouring in from the original entrance in the north-west wall (Fig. 312), had fortunately prevented further destructive burrowing.

Remains of stucco images.

On clearing, the interior proved to have contained on the south-east a colossal stucco image probably of a standing Buddha, now completely broken except for remains of one foot, and five smaller standing figures in stucco elsewhere. Small platforms about 6 inches high along the north-east and south-west walls retained the broken bases for two statues on each side. But of these only one was found still standing to the waist, at a height of over 4 feet (Fig. 296); the rest of these four statues had crumbled away completely. The surviving portion of the statue, which probably represented a Bodhisattva, showed the hips and legs covered with a dark red robe. This had a light blue border below and was ornamented with a large rectangular pattern of dark green, edged with chains of blue dots. Above the missing feet the robe left uncovered a deep-blue under-garment in rich folds. The reed-bundles of the framework protruded at the waist. The space left available on the north-west wall by the side of the entrance was occupied by a stucco image of which only the lower portion of the legs with the feet survived (Figs. 312, 313). Above this the framework of wood and reeds was exposed up to the height of the waist. The robe, still seen from the knees downwards, showed rich ornamentation in colours, representing textile designs whether woven or embroidered. The ground-colour of the garment was a rich Pompeian red. Over this there were shown in

Textile designs of robe.

longitudinal stripes, treated as pleats of the garment, from right to left: a band of white circlets on dark blue wash; a palmette ornament, figured by small white dots (pearls?) over black; an elaborate floral design with small blossoms in white, dark blue, and green; a band of white circlets over light pink wash; a palmette pattern as previously described; fern-like tracery in dark brown over red ground, and finally a band of white circlets over pale blue and pink washes suggesting shot-silk.

Remains of mural paintings.

Of the mural paintings in tempera more fortunately remained, and the best-preserved portions I succeeded in safely removing with Naik Rām Singh's help. From the right of the statue last described came the fine figure of a standing Avalokiteśvara, F. XII. 005, which is reproduced in Plate CXXV. As it has been fully described in the List below, it will suffice here to call attention to the manifold features of detail in drapery, ornaments, etc., which show very close attachment to the style of Graeco-Buddhist sculpture. The medallion ornamentation of both halo and vesica is uncommon, and is curiously suggestive of a favourite motif of Sassanian textiles.[1] The influence of Persian art makes itself distinctly felt also elsewhere in some of these frescoes. Above this there remained the lower portion of a figure, standing on a lotus, F. XII. 006 (Figs. 312, 313). The south-west wall had lost almost the whole of its plaster surface. But in the south corner there remained portions, seen in Fig. 314 on the right, of a vesica decorated with large round flowers, and above of a diaper of small figures of seated Buddhas. A similar diaper, but with somewhat larger figures, filled what remained of the south-east wall surface by the right side of the vesica of the completely destroyed colossal statue.[2] F. XII. 0010 is a portion of the frieze, gracefully decorated with floral motifs, which extended along the foot of this wall. Fig. 296 shows what survived of the frescoed surface to the north-east. Of the design to the right of the relievo figure, which showed Buddhas seated in meditation with the flowers and stem of a large lotus plant extending towards the corner, F. XII. 009 comprises the best-preserved portion.

Fresco of 'Buddhist Madonna'.

But by far the most interesting piece of the wall-paintings in this shrine is the fresco which decorated the south side of the entrance. This fresco, of which the position is seen in Fig. 312, had suffered below badly by abrasion for which the feet of worshippers visiting the shrine were probably responsible. But the upper portion had retained most of its harmonious colouring, and was safely recovered (Plate XIII).[3] It shows, as was first recognized by M. Foucher, the Indian goddess Hārītī with five of her offspring. In his brilliant essay on *La Madone bouddhique* M. Foucher has proved this identification, and that of a similar representation in linen painting found at Yār-khoto and now in Berlin, by conclusive evidence drawn from his unequalled knowledge of the Graeco-Buddhist sculptures of Gandhāra.[4] This makes it unnecessary here to point out in detail how closely all features of the composition agree with the conception of the goddess developed in Indian Buddhism. From being in origin a 'Yakṣiṇī' personifying the dread disease of small-pox and a destroyer of children, she had been elevated by a process of pious superstition, which has many parallels in the history of folk-lore and religion, into a benign goddess not merely protecting young children but producing fecundity.

[1] See also the vesica of the larger seated Buddha on the right in Fig. 296. Cf. above, p. 906, for a similar ornamental border in a fresco fragment from Khādalik, illustrated in Pl. CXVI. A, Kha. i. c. 00119.

[2] For fresco pieces from this diaper, see F. XII. 007–8; Fig. 314.

[3] For a reproduction in colour, on a reduced scale, see *Desert Cathay*, ii. p. 414, Pl. XI. This, as well as the heliogravure plate XIX, accompanying M. Foucher's paper, *La Madone bouddhique*, in *Monuments et Mémoires*, vol. xvii, 1910, of the Académie des Inscriptions, was prepared before the fresco panel was completed by joining up a narrow portion belonging to its left.

[4] Cf. Foucher, *La Madone bouddhique*, pp. 11 sqq., in the publication quoted in the preceding note. For an English translation, see now Foucher, *The beginnings of Buddhist Art*, pp. 285 sqq.

The pilgrim I-tsing, after telling the pious legend which accounted for the ogress' conversion by Buddha and her subsequent worship, informs us that 'the image of Hārītī is found either in the porch or in a corner of the dining-hall of all Indian monasteries, depicting her as holding a babe in her arms, and round her knees three or five children'.[5] It is thus that we find the goddess represented by the side of the entrance to the shrine. One of the children around her embraces her left breast; three others bestride her shoulders and right forearm, while the fifth, a boy, is seen dancing by her right side. Besides these figures seen in the panel there could be faintly distinguished, on the almost completely abraded surface below by the left leg, two little figures in tight-fitting dress gambolling about, while near her right foot a small naked boy seemed to be warding off a blow struck probably by another little figure completely effaced. It is curious to observe that exactly the same number of Hārītī's children which our fresco appears to have shown is found also in the Turfān linen painting, which otherwise differs greatly in composition and style. Representation of goddess *Hārītī*.

Apart from its iconographic significance, this painting of the deified 'demon mother of the children' presents also other points of interest. In her short rounded 'moon face', combining matron-like sadness and sweetness in its dreamy expression, it is impossible not to recognize the influence of a Persian type of beauty. But it is far less strongly marked here than in the faces of the princess and her attendants in the painted panel from Dandān-oilik, representing the legend of the origin of sericulture at Khotan,[6] or in the faces of Vessantara's queen and of the girls in the dado at the Mīrān temple M. v.[7] The symmetric love-locks of these figures appear, however, here too, as do also the strings of pearls in the hair. In strange contrast with these quasi-Western features are the frightfully distended lobes of the ears and the strongly marked folds of the neck, which M. Foucher calls 'classic in India'. Among the details of the elaborate dress[8] it may suffice to mention the resemblance of the short-sleeved close-fitting jacket to that worn by the Princess in the Dandān-oilik panel just referred to. Features of goddess' face.

The wall on the opposite side of the entrance was found, unfortunately, broken. As M. Foucher has justly pointed out, 'we should have expected to see there the genius of riches, the usual counterpart of the goddess of children'. This 'genius with the golden bag', whom I-tsing's above-quoted account mentions as usually found seated at the porch of monasteries in India, and whose identity with Kuvera, the god of wealth, has long ago been established, is often found represented side by side with Hārītī in Gandhāra relievos.[9] His conjunction with her would have been particularly appropriate at a shrine of ancient Khotan; for we know that Kuvera in his aspect as the 'guardian king of the North', or Vaiśravaṇa, was of old particularly worshipped at Khotan as the ancestor of the royal race and the protecting divinity of the country.[10]

The excavation of the shrine F. XII, which completed my work at the site, was rewarded also by a manuscript find of value. The initial clearing along the south-east wall brought to light over half a dozen fragments of Pōthī leaves in Central-Asian Upright Gupta script and in Sanskrit, and later I had the satisfaction of extracting myself, from the sand near the low platform once bearing the images on the north-west side, an excellently preserved packet comprising 33 complete folios of a Sanskrit text. The leaves, measuring about 14 by $4\frac{1}{2}$ inches with a string-hole at about one-third of their length, stuck close together, but could subsequently be separated without damage at the British Find of Sanskrit Pōthī.

[5] Cf. Takakusu, *A Record of Buddhist Practices*, by I-tsing, p. 37.

[6] See *Ancient Khotan*, ii. Pl. LXIII, D. X. 4.

[7] See above, pp. 518 sq., 525 sqq.; Figs. 134, 135, 138–40, 143.

[8] For these the three-colour reproduction in *Desert Cathay*, ii. Pl. XI, may be consulted with advantage.

[9] Cf. Foucher, *The beginnings of Buddhist Art*, pp. 141 sq., 282.

[10] Cf. *Ancient Khotan*, i. pp. 156–8.

Museum.[11] They proved to contain a considerable portion of the Central-Asian version of the *Saddharmapuṇḍarīka*, and have since been published by Professor de la Vallée Poussin.[12] He recognizes a close resemblance in palaeographic features between this manuscript and the leaves of the *Vajracchedikā* text which was recovered from a monastic dwelling of Dandān-oilik and which Dr. Hoernle considers as of the seventh or eighth century.[13]

Date and position of shrine F. XII.

This dating, conjectural as it must be in view of the many uncertainties still besetting the history of Brāhmī writing in Central Asia, would have an important bearing on the chronology of the site—if we were justified in *a priori* assuming that the shrine F. XII dated from the same period as the other remains of Farhād-Bēg-yailaki. But grave doubts against this assumption are raised by the position of the shrine, which, in spite of its close vicinity, essentially differs from that of the other ruins. While these are found invariably on wind-eroded terraces or else on flat ground which has the same level as such terraces situated close by, the shrine F. XII is built on a tamarisk-cone the top of which at the time of construction must have risen at least 20 feet, if not more, above the general ground-level of the site. About the peculiar nature of the position thus chosen there can be no possible doubt,[14] and it alone suffices to set this ruin F. XII quite apart from the rest. I know no parallel for it except that of modern Mazārs with adjoining Muhammadan burial-places in the Khotan region, which are frequently found placed on high tamarisk-cones or other conspicuous eminences on the edge of the desert.

Analogy of position in Mazārs.

It cannot be mere chance that quite a number of these places of modern local worship, often marked only by a collection of high poles bedecked with votive rags, Yak tails, etc., are to be found close to old sites. Thus, in the very vicinity of the site with which we are concerned here, we have the Ulūgh-mazār and the Mazār of Lachin-atā connected with the remains of ancient P'i-mo.[15] In the midst of the ' Tatis ' of Farhād-Bēg-yailaki itself there rises such a modest Mazār (see Plate 56 between IV and V) said to have been visited from ' Old Domoko ', while further away it will suffice to mention the much-frequented Mazārs of Imām Ja'far Sādiq and Imām 'Āsīm in positions exactly corresponding with reference to the Niya Site and the Ak-sipil remains respectively.[16] The analogy thus presented and what we know in the Khotan region about all the essential features of local worship reaching back far into Buddhist times are bound to raise the surmise that we may have in F. XII, not a ruin contemporary with the other remains of Farhād-Bēg-yailaki, but a shrine raised in this ' Mazār ' fashion near the old site after it had been abandoned to the desert, and thus, perhaps, centuries later.

Chronological evidence of coin finds.

In view of this possibility it will be safest, when examining the question as to the approximate date of the site, to begin by considering only those chronological indications which the finds made at the site in general and apart from F. XII furnish. A brief review will show, I believe, that these indications are in close accord among themselves, and that they all point to a date of abandonment distinctly earlier than the period of T'ang dominion in the Tārīm Basin. In the first place importance may be claimed for the evidence of the coins. Apart from the *Wu-chu* coin unearthed on the floor of the temple cella F. III, eight other Chinese coins were found at the site, all on the surface of wind-eroded ground, four of them near the ruined house I, three near the monastic dwelling II, and

[11] For specimens, see Pl. CXLIV, F. XII. 7.

[12] Cf. L. de la Vallée Poussin, *J.R.A.S.*, 1911, pp. 1067 sqq.; see also Hoernle, Appendix *F*.

[13] Cf. *Ancient Khotan*, i, p. 295, Dr. Hoernle's note vi, on Nos. 14, 15, 17, 18. Prof. de la Vallée Poussin, *J.R.A.S.*, 1911, pp. 1068, nevertheless calls attention to certain characters which seem more archaic.

[14] The unusual thickness of the walls in F. XII, wholly out of proportion to the size of the structure, is directly due to this position, the loose sand (*recte* loess dust) accumulated round the tamarisk growth in such cones affording no secure foundation.

[15] Cf. *Ancient Khotan*, i. pp. 461 sqq.; Maps Nos. 27. D. 4; 31. A. 4.

[16] For Imām 'Āsim Mazār, see Map No. 27. A. 4; for Imām Ja'far Sādiq, cf. *Ancient Khotan*, i. p. 313.

one at the 'Tati' of v. As a reference to Appendix *B* will show, all these are *Wu-chu* pieces probably of the Later Han dynasty or uninscribed and clipped coins ascribed to the same period. Not a single T'ang coin was discovered at the site. In order to emphasize the significance of this fact it will suffice to point out that among the coins actually found in the course of my exploration at the Khādalik site not less than 98 belonged to T'ang issues and only 5 were *Wu-chu* pieces.[17] Thus the numismatic evidence as to the earlier date of the remains at Farhād-Bēg-yailaki appears to me very strong.

Evidence of clay sealings, wood-carving, etc.

The same is the case with the clay sealings. All three found were manifestly once attached to wooden documents, and the impressions on them are from gems showing either late classical workmanship or its immediate influence.[18] Their type is closely allied to that of the clay seal impressions found at the Niya Site. Some value must be attached also to the architectural evidence of the double-bracket from F. II, which, as we have seen, represents a development of the form familiar from the Niya Site, but one decidedly older than that seen in the corresponding wood-carvings of Khādalik.[19] Our knowledge of Buddhist pictorial art in the Khotan region is far too imperfect as yet for any safe conclusion to be drawn from the style of the few painted panels found at F. II. But my general impression is that they show the influence of Indian models more closely than the similar panels from Dandān-oilik or the fresco fragments recovered from Khādalik. On the other hand, there seems little or no difference in style between the latter and the wall-paintings found in the shrine F. XII.[20] Finally, attention may be called also to the marked distinction in material and character between the written remains found at the Farhād-Bēg-yailaki ruins and those from Dandān-oilik and Khādalik. At both the latter sites paper appears as the regular writing-material, whereas at the Farhād-Bēg-yailaki site the number of paper fragments is insignificant and wooden tablets predominate. Nor should it be ignored that all the written remains recovered from the latter are in Brahmī script, while both Dandān-oilik and Khādalik have yielded up Chinese pieces also, and the second Tibetan pieces in addition.

Earlier abandonment of site.

Regard for all these indications combined makes me inclined to conclude that the Farhād-Bēg-yailaki site must have ceased to be occupied a considerable time earlier than the settlements of Dandān-oilik and Khādalik, which, as we have seen, were abandoned towards the very end of the eighth century or very soon after.[21] It is impossible at present more definitely to indicate the actual time when the site became deserted. But two observations should be taken into account as likely to help in fixing an approximate chronological limit. One is purely negative—the total absence of written remains in Kharoṣṭhī, a script which, as we know, continued in use within the Tārīm Basin down to the fourth century, if not even somewhat later. The other indication is of a topographical character and supplied by Sung Yün's narrative. This traveller, passing in A. D. 519 from Charchan towards Khotan, mentions the town of Mo 末城 at a distance of 22 li to the east of Han-mo 捍麼. Of this place M. Chavannes has proved that it was identical with Hsüan-tsang's P'i-mo 媲摩, and for its location at the site of Uzun-tati, north of Ulūgh-ziārat (or Ulūgh-mazār, Map No. 27. D. 4), I believe that I have advanced strong and convincing reasons after my first exploration of the site.[22]

Sung Yün's 'town of *Mo*'.

When recording this view I had already suggested that 'Sung Yün's town of *Mo* which was 22 li east of his *Han-mo* would . . . have to be looked for somewhere about "Old Domoko" or a little to the north of it'. A reference to the map (No. 31. A. 4) shows that the Fārhad-Bēg-yailaki site corresponds to this location as closely as we can reasonably expect. Its northernmost 'Tatis' lie

[17] Cf. above, p. 159; also Appendix *B*.
[18] See above, pp. 1247, 1250.
[19] See above, p. 491.
[20] Cf. above, pp. 165 sqq.
[21] Cf. *Ancient Khotan*, i. pp. 277, 283 sq.; above, p. 159.
[22] See *Ancient Khotan*, i. p. 463, note 9.

exactly due east of that portion of the Uzun-tati area which I revisited in 1908, and which Map No. 27. D. 4 shows a little over 3 miles to the north-north-east of Ulūgh-mazār. The distance between the two sites is just 7 miles on the map, and may be somewhat less, as the débris area of Uzun-tati is likely to extend further east than actually surveyed. Thus there is exact agreement in the bearing and a very close approach in the distance to support the identification of our site with Sung Yün's Mo. Assuming the latter place was abandoned some time between Sung Yün's passage and the end of the sixth century, we should arrive at an upper date limit for the site with which all the indications above discussed—numismatic, archaeological, epigraphic—would agree remarkably well. The shrine F. XII might have been built near the deserted site in the manner of Muhammadan Mazārs a century or two later. After what has been shown above at length about the striking changes in the position of the irrigable area to which the tract about Domoko is peculiarly subject,[23] it appears both impossible and needless to advance here conjectures as to the particular cause which may have brought about this southward shift of the settlement to Khādalik and the smaller sites around it.

OBJECTS FOUND AT FARHĀD-BĒG-YAILAKI

F. 001. Fr. of decayed glass, iridescent. $\frac{5}{8}'' \times \frac{3}{8}'' \times \frac{1}{4}''$.

F. 005. Terra-cotta spinning whorl. Hollowed base. Top convex. Near base, two incised lines with row of nicks between them. Round hollow of base, four incised rays with incised dots between. Red clay, broken. Diam. 1", h. $\frac{3}{4}''$.

OBJECTS EXCAVATED AT FARHĀD-BĒG-YAILAKI

F. I. 001. Whisk-broom made of bundle of grass; for similar type see Kha. v. 002, and *Ancient Khotan*, ii. Pl. LXXIII, D. ii. 011. Length, $18\frac{3}{4}''$.

F. I. 002. Whisk-broom similar to F. I. 001, with loop for hanging up. Length, 18".

F. I. 003. Bag made of skin of leopard's R. paw, with claws. The flesh and bones have been removed without cutting skin. $4\frac{5}{8}'' \times 5''$.

F. I. 004. Bundle of leather thongs. Width $\frac{1}{4}''$ to $\frac{3}{4}''$.

F. I. 005. Piece of leather, prob. from shoe-upper, with holes for stitches along top and at end. Coloured carmine outside. $7\frac{1}{2}'' \times 1\frac{3}{16}''$.

F. I. 006. Horn knife-handle broken in two; straight, flat, with rounded edges; one end hollowed out for holding shaft. (Length complete) $4\frac{3}{8}'' \times \frac{9}{16}''$.

F. I. 007. Wooden toy bow and arrow. Bow roughly made, bent, notched near ends; with hole in middle, in which is loosely fitted an arrow thickened at head and shaft end so that it cannot slip out, but moves up and down. Length of bow $2\frac{3}{16}''$; length of arrow $1\frac{3}{4}''$.

F. I. 008. Fr. of glass from rim of white translucent vessel, slightly rounded and with rim turned outwards. $1'' \times \frac{13}{16}'' \times \frac{1}{16}''$.

F. I. 009. a–c. Three frs. of fabrics:

a. Yellow cotton (?) with three lines of green inwoven. Rather worn, plain weave; warps and woof-threads run in pairs. $7'' \times 4\frac{3}{4}''$.

b. Coarse white woollen (?) fabric. No pattern. Firm and even in texture, plain weave. $6\frac{1}{2}'' \times 1\frac{3}{4}''$.

c. Loosely woven red woollen material, with fr. of red stuff of closer texture, and brownish felt attached. $6'' \times c.\ 1''$.

F. I. 0010. a–e. Wooden implements:

a. Stick with crutch end, carved in one piece; end of handle pointed. Crutch cut from main limb, handle being a twig. Possibly silversmith's hammer. Length 6", length of crutch $2\frac{1}{4}''$.

b. Stick with round flat nail-like head, bevelled to edge. Possibly wheel-ruler for stucco work. Length $6\frac{1}{4}''$, diam. of head $1\frac{3}{8}''$.

c and *d.* Sticks sq. in section, pointed at tip, notched at other end to form knob head on which bark remains. Marking-pegs (?). Length $9\frac{5}{8}''$ and $8\frac{1}{4}''$.

e. Key of usual type, but very poor make; four peg-holes arranged rhomboid fashion; only one broken peg left. $5\frac{15}{16}'' \times \frac{3}{4}''$.

F. I. b. 001. Terra-cotta fr. of appliqué, bird's tail (?), thin. $1\frac{1}{4}'' \times \frac{5}{8}'' \times \frac{1}{16}''$.

F. I. b. 002. a–e. String of ornament frs.:

a, b. Two beads of blue paste. *a* barrel-shaped, *b* cubical but with corners faceted. *a* $\frac{3}{8}'' \times \frac{3}{8}''$; *b* $\frac{3}{8}'' \times \frac{5}{16}''$.

c, d. Two pieces of salmon-coloured coral (?), pierced lengthways. *c* $\frac{1}{2}'' \times \frac{1}{8}''$; *d* $\frac{3}{16}'' \times \frac{1}{8}''$.

e. Hollow boss made of bronze wire coiled in spiral. Wire is of two twisted strands. Curl of hair off statue (?). Cf. same in stucco, Kha. ii. N. 0010. $\frac{1}{2}'' \times \frac{3}{8}''$.

F. I. b. 003. Glass ring, half of; triangular in section. Both outer sides have slanting lines incised. Diam. *c.* $\frac{5}{8}''$.

F. I. b. 004. Bronze strip, slightly curved; on convex side has three rows of punched circles, five to a row. Broken each end. $\frac{5}{8}'' \times \frac{3}{8}'' \times \frac{1}{50}''$.

[23] Cf. above, pp. 207 sqq.

F. I. b. 005. Bronze bezel of ring, hollowed with toothed edge to take round stone $\frac{5}{16}$" diam. Diam. *c.* $\frac{7}{8}$".

F. I. b. 006. Stucco relief plaque of seated Buddha in attitude of meditation. No halo; circular vesica composed of single lotus flower, radiating petals. No features and no traces of paint left. Much of white ground remains. Red clay, plentifully mixed with fibre. Diam. 2".

F. I. b. 007. Stucco relief fr. of seated Buddha. L. knee raised; vesica and throne destroyed. Dark grey paint for dress, and traces of pink for face; features gone. To R. edge trace of green on fr. of vesica. Red clay mixed with fibre. 2" × 1$\frac{3}{8}$".

F. I. b. 008. Fresco fr.; on R., against parti-coloured background—below red, above emerald green—is well-drawn head $\frac{3}{4}$ L. Flesh pink, shaded with red, and high lights in heavy white. On each cheek two short black lines, near together, convex towards centre of face. Two similar marks in centre of forehead. Head-dress falls behind ears in flat bands cut square at shoulder level. Three-row pearl necklace, and pearls from head in front of L. ear. Upper part of head missing; prob. a woman's. Traces of further painting on L. 5" × 3".

F. II. 001. Wooden hair-comb, rectang., with double set of teeth of different finenesses, one on each side of middle rib, which is decorated on each side with two bands of incised lines. Teeth somewhat broken. Western type; cf. *Berlin. Kön. Museen, Altchrist. Bildwerke*, iii. Pl. X. 301. 2$\frac{9}{16}$" × 2$\frac{3}{4}$".

F. II. 002. Wooden hair-comb with rounded top. Teeth a little broken. 2$\frac{1}{4}$" × 2$\frac{1}{2}$".

F. II. i. 1. Pottery fr. of cylindrical neck of vessel. Fine red pottery, hand-made. Half an inch below lip is single band of cable-moulding; below this, double band of same. Beneath this again perpendicular fluting. H. 2$\frac{3}{4}$".

F. II. i. 2. Pottery fr. from neck of vessel. Light red ware, hand-made. Rim plain; then frieze of appliqué ornaments (balusters?) defaced. Second frieze of jewel ornaments. 2" × 2$\frac{7}{16}$".

F. II. i. 3. Pottery fr., fine, dark red. At top, appliqué moulding ornament by series of notches; below this, frieze of jewel ornaments, oval, with bead rim settings, appliqué. 2$\frac{7}{16}$" × 1$\frac{13}{16}$".

F. II. i. 4. Pottery fr. from neck of vessel. Hard red ware, wheel-made, lip slightly everted. 1$\frac{11}{16}$" × 1$\frac{7}{8}$".

F. II. i. 5. Terra-cotta fr. of model of phallus. Length 2$\frac{1}{4}$".

F. II. i. 6. Terra-cotta fr. of neck and forepart of winged-horse handle. Cf. Yo. 0015. f, type *b*. Length 2$\frac{9}{16}$".

F. II. i. 001. Mass of ex-voto fabrics and Brāhmī paper manuscript remains eaten by mice, found at foot of image niche. Débris only. Contains scraps of plain silk fabrics, purple and green.

F. II. i. 002. Terra-cotta appliqué orn., grotesque head of 'Silenus' type. Prominent eyebrows, frown, and wrinkles; fat cheeks and smiling mouth. Beard treated like Mi. xi. 00104, ears like dog's. Broken above forehead; recalls Egyptian Bes type. 2$\frac{7}{8}$" × 1$\frac{3}{8}$".

F. II. i. 003. Clay sealing with impression from circular convex gem. Broken, lower L. part of impression missing.

Hunting scene: in centre, man on horseback galloping R. Behind horse a lioness, rearing straight up with uplifted talons. The rider turns his body front; L. hand raised to head, R. hand lifted holding sword that disappears behind his shoulder. Below horse a goat or deer (forequarters only remain) running R.

Composition shows classical influence (attitude of fig. closely resembles that in 'Alexander's hunt' scenes), but workmanship poor. Great use of drill; details coarse.

Cf. Furtwängler, *Antike Gemmen*, Taf. xi. 5. Clay sealing 1$\frac{1}{2}$" × 1"; impression; diam. $\frac{15}{16}$". Pl. V.

F. II. i. 004. Clay sealing; sq. with oval impression, round which are marks of setting, viz. four round bosses joined each by four smaller sq. nail-heads. Impression shows female bust, very careful work. Head $\frac{3}{4}$ R., R. cheek and eye defaced. Hair worn in heavy roll round brows, and indicated by fine lines upwards over roll to crown of head. Tassel-shaped ear-rings. Tight-fitting tunic with folds shown over breast, but collar cut low. Classical influence faint; cf. perhaps Furtwängler, *Antike Gemmen*, Taf. xviii. 46 and lxi. 74, for hair.

Seal 1$\frac{3}{8}$" sq., impression $\frac{5}{8}$" × $\frac{1}{2}$". Pl. V.

F. II. i. 005. Carved wooden niche panel. Above, projecting moulding plain; below, row of vandykes bordered by plain mouldings. Triangles between them are bevelled away each side of the perpendicular by two incised chevrons. 3′ 5$\frac{3}{4}$" × 4" × 6" (orig. thickness). Pl. XVII.

F. II. ii. 01. Carved wooden double-bracket or cantilever, with socket in centre for head of post which remains broken in the hole.

Side elevation: architrave 2" wide, divided horizontally into (1) flat bead distinguished by (2) a triangular groove from (3) a bevel (*c.* 45°), 1$\frac{1}{16}$" wide below, which is a rectangular billet moulding, each billet 2$\frac{1}{4}$" long with $\frac{3}{8}$" interval containing prism shape. Below this is an abacus 22" long, surmounted by secondary architrave of its own length, having 1" projection. This is $\frac{1}{2}$" below the main architrave, and consists of (1) flat bead with sq. undercut; (2) quarter round moulding 1" wide; (3) billeted moulding resembling that above, but with members only 2" long.

Below this the abacus has plain depth of 3$\frac{1}{8}$"; its sides are square, but, at base, profile shows central flat 7" long. From this a cavetto *c.* 30° and 5" long turning into half-round and again to vertical flat forming at end of abacus a dentil 1$\frac{1}{2}$" wide. This space is partly filled on a lower plane by an egg-moulding (seen in profile) which characterizes the under face of abacus. On either side of abacus

a rectangular cavetto ¾″ deep, its upper end 3½″ above bottom face of abacus; then a horizontal chamfer 9″ long, above which the architrave is continued from the longer sides.

Plan of under surface. Abacus, plain central portion with socket, diam. 2½″; from ends of dentil project on same plane towards centre (in relief against cavetto) large single egg-mouldings (cf. examples from Egypt, Strzygowski, *Koptische Kunst*, No. 7321; from Asia, the Cook sarcophagus, cf. Strzygowski, 'A sarcophagus of the Sidamara type', *J.H.S.*, xxvii, 1907).

Side portions, modillions 9″ × 5¼″, four-petalled flowers of Gandhāra type; along centre of each petal a rib or stamen beaded; between petals conventionalized lotus buds of Egyptian type. Cf. *Ancient Khotan*, i. p. 413; ii. Pl. LXIX, N. xx. 02.

Wood sound at one end, other end rather decayed. 4′ × 8¾″. Pl. XVII.

F. II. iii. 1. Painted wooden panel with Buddha seated in meditation on blue lotus. White robe with grey border, white vesica with dark red border, blue nimbus with white border. Very bad condition, subject on *rev.* worn off. 9½″ × 5″.

F. II. iii. 2. Painted wooden panel with top cut to point. Against oval blue vesica bordered with pink and dark brown is standing Buddha or Bodhisattva fig., extremely well proportioned and slim-waisted. Pose easy and graceful. Head very Indian and not well placed on the neck, being thrust too far forward. Fig. has *uṣṇīṣa* but no *ūrṇā*; hair blue and figured with tight curls. R. hand is downwards by side, prob. holding something, but surface damaged; L. hand with palm to breast, fingers curled up. Fig. wears short plain loin-cloth. The otherwise nude body and limbs have designs painted on them in red outline. On middle is seated Buddha fig., another on R. breast; on front of R. shoulder a wheel-shaped flower, on each upper arm two billet-shaped objects, perhaps Pōthīs, and on each forearm a pigeon or parrot. Feet and legs bare. From the leg openings of loin-cloth seems to issue some gauzy, pleated material, which is drawn tight at about mid-thigh. Very little colour left, but flesh seems to have been pale pink. Nimbus (?) circular, pink, with red and pink borders; Padmāsana pink.

Much corroded. The board shows at upper end cuts as if it had been used for leather-cutting.

1′ 2″ × 7¼″. Pl. CXXV.

F. II. iii. 4. Painted wooden panel with standing Buddha on red lotus. R. hand upraised prob. in *vitarka-mudrā*, L. low holding robes. Dark red robe over dark green under-robe which comes only half-way down shin. Vesica blue and light buff, nimbus dark green with red border. Hair blue, flesh dark buff. Very bad condition. 1′ 6½″ × 8″.

F. II. iii. 5. Painted wooden panel, with Buddha looking L. seated in meditation on white lotus. White robe with grey border. Blue and white vesica. Dark grey and white nimbus. Much of the present white is due to corrosion. Rough work, bad condition. 1′ 3¼″ × 6″.

F. II. iii. 6. Painted wooden panel, with standing Buddha ¾ L. R. hand extended horizontally, palm up, open; L. hand against breast in somewhat similar pose. Web between thumb and forefinger shown on both. Eyes rather oblique. Line of back of neck and head curiously straight (bull-necked). Hair blue; upper robe light brown with white edges; under-robe dull grey. Vesica blue, bordered with red and buff. Nimbus buff, bordered red. Lower part of panel deep crimson with white foliage and large lotus bud in R. corner. *Rev.* blank. Rough work. 8″ × 3¾″ × ⅝″.

F. II. iii. 001. a. Stucco relief fr. of vesica. Somewhat concave, bordered with line of alternate seven-petalled flowers and jewel orns., between raised edges. Flowers painted alternately green over blackish-grey foundation (very few traces of green) and blue. Spaces between orns. also blackish grey. On field two applied reliefs of seated Buddhas in attitude of meditation, and mark of vesica of a third on R. Between Buddhas to L. a lotus bud in field, to R. a half-opened lotus. These show traces of the pale blue that appears plentifully on the background. One trace of red is seen on bud, but comes prob. from vesica of L. Buddha, of which border is red and interior grey. Traces of blue on robe. L. knee and top of halo gone. R. Buddha similar (complete), but colour has worn off border of vesica. Hair black and features defaced in both. No colour shows on nimbi. Usual white ground for paint.

Back covered with smooth coat of stucco showing no signs of attachment. Prob. vesica of fig. standing alone.

Gr. length 14″, gr. width 6½″. Pl. CXXXIX.

F. II. iii. 001. b. Stucco relief fr. Head and halo of Buddha. Features defaced, though eyes just discernible. From same mould as F. II. iii. 001. a, to which, no doubt, it belonged. Chin to crown 1¼″, halo 1⅞″ × 2″.

F. II. iii. 001. c. Stucco relief fr. Head and L. part of halo and vesica of Buddha from same mould as F. II. iii. 001. a. Grey vesica with red border. Nose and mouth worn down; eyes and eyebrows in black paint show. No colour visible on halo. White stucco. Chin to crown 1¼″, H. of halo 1⅞″.

F. II. iii. 002. Painted wooden panel with subject on each side:

Obv. Standing Buddha on lotus. R. hand raised to breast and turned palm outward as in *abhaya-mudrā*; L. pendent holding fold of robe. Three garments: Upper robe white bordered with grey, reaching nearly to ankles; second robe, deep red with white border, richly pleated, the folds at edge forming regular nebuly pattern. This garment appears only at a small division between falling edges of upper robe. Under garment grey-green, closely pleated, lower part only visible, leaving ankles and feet exposed.

Face almost circular, eyes very long, and inclined slightly upward at outer angles. Ears elongated. Three deep folds in neck. Hair black with *uṣṇīṣa* surrounded by string of pearls. All flesh pink outlined with red. R. hand is treated in web-like manner.

Green nimbus encircled by yellow band, and outer deep red band with dividing lines of white. Elongated vesica dark blue-black, enclosed by bands of dark red, pale yellow (?), and grey, with dividing lines of white. Lower portion of panel to height of edge of lowest garment is very rich red, bearing flowering plants in white.

On it, in R. bottom corner, is the donor, a kneeling male fig. $\frac{3}{4}$ L., hands together in attitude of prayer or adoration, dressed in long dark grey coat held in at waist by belt. Coat has broad cuffs and large lapels of light buff marked with white pattern, and a band of this light colour borders its overlapping edge, extending below belt. The head-dress is of the Persian type as worn by the fig. in D. vii. 6 (*Ancient Khotan*, ii. Pl. LXI). Above, to shoulder level, the background is buff, with green lotus low down on L. of Buddha, and a roughly drawn lotus bud in grey above donor.

Above the buff ground are successive bands of colour running horizontally: grey, buff, deep red with white nebuly lower edge, and pale grey. Above this the 'pinked' edge of pendent drapery suggests a canopy

Rev. Male fig. seated on camel, and having a general resemblance to camel rider in D. vii. 5 (*Ancient Khotan*, ii. Pl. LIX). Face very round and plump. Minute moustache and 'imperial'. Eyebrows strongly arched. Hair long, spreading behind shoulders.

Greenish-grey coat to knees cut with rounded skirts, bordered, cuffed, and collared with white (fur ?), and with one broad lapel also white. Just below shoulders a kind of epaulette. Sword-belt and straight sword of somewhat Roman type. Pantaloons deep red with spot pattern (a circle) in white. Black Hessians. In R. hand upheld a patera. Under L. arm and hanging on to shoulder, an Indian bow, the string being to back and bow to front. L. hand holds nose-string of camel. Behind head a russet-green nimbus, bordered deep red and black with white edge. Vesica, black with light border, extends downwards as far as saddle. A light sash floats out from behind shoulders. Camel is badly drawn, and much too small compared with the rider; painted buff with red outlines, moves towards L.

In front of camel kneels a small male fig. as donor, but resembling the camel rider in face and dress, excepting that the coat is light (buff) and the sleeves and trimming dark (fur ?). The donor appears to support a large dark green bud-like object with a long lotus-like stalk.

Background from lower edge for about one-fifth of height is deep red, sprinkled with white flowers. In centre of this band, between feet of camel, is lotus bud; and to R. and L. a circular disc of dark buff with Brāhmī inscription of five lines. Above red band, background is buff for three-fifths of height. Upper band (one-fifth) is dark green with roughly drawn canopy centred behind head of rider. On L. is third disc bearing defaced device. White flowers scattered on green ground. All work sketchy.

Surfaces sand-encrusted and defaced.

$17\frac{1}{4}'' \times 10\frac{3}{8}'' \times \frac{3}{4}''$. Pl. CXXV.

F. II. iii. 003. Stucco fr. R. foot standing on lotus throne, of which only segment to R. of foot is left. Behind is mark of vesica, broken off, which apparently had pale blue background. Round inner edge of throne's petals are traces of dark grey. Foot broken where it and throne are pierced to take core of leg. Nails carefully marked. Hard white stucco. Foot $2'' \times 1\frac{1}{4}''$, throne $4\frac{1}{2}'' \times 3\frac{1}{4}'' \times \frac{1}{2}''$.

F. II. iii. 004. Painted panel, almost effaced. Traces of standing Buddha with red robe, white flesh, black and white vesica. $5\frac{1}{2}'' \times 3\frac{1}{4}'' \times \frac{1}{2}''$.

F. III. i. 003. Stucco head, from crouching demon supporting a Lokapāla. Hair covering only back of head indicated by incised lines. Its beginning is shown by raised ridge behind very receding forehead. On hair, traces of red paint. Lips closed, but smiling, with hole at each corner of mouth. Nose broad and flat (but a good deal worn). Eyes bulge. Edges of lids indicated by incised lines half-way up the protuberance, which cross and are continued a short way beyond outer corner. Hole at inner corner, and pupil indicated by another. R. ear missing, L. ear very flat. Surface much damaged, but traces here and there of white ground for paint, and of red about lips and in middle of cheek.

Chin to crown $6''$.

F. III. iii. 001. Fr. of wooden statuette. L. foot standing on part of lotus throne. Traces showing that whole was gilded. Foot broken at ankle; nails marked. Delicate work. Foot $\frac{7}{8}'' \times \frac{7}{16}''$, throne $1\frac{3}{4}'' \times \frac{9}{16}''$.

F. IV. 001. Wooden hair-comb with rounded top. Good condition. $3\frac{1}{2}'' \times 3''$.

F. IV. 002. Terra-cotta appliqué orn. Head of smiling 'demon'. Type of Yo. 0024. i. $1'' \times 1\frac{1}{8}''$.

F. IV. 003. Fr. of paper with one small trace of ink (?). $5\frac{1}{4}'' \times \frac{3}{4}''$.

F. IV. 004. Part of fire-stick, 'female'. Five 'hearths' along face (the fr. being broken off through fifth) of varying sizes and depths, and charred at bottom. On side of each 'hearth' a notch is cut from side and continued down to bottom surface of stick. Cf. L. A. v. ii. 1, and Joyce, *Man*, xi. No. 3. Hard and well preserved. $3'' \times \frac{5}{8}'' \times \frac{1}{2}''$.

F. IV. 005. Wooden model of arrow. Triangular three-barbed point carved in same piece; end of shaft tapers (broken). Length $10\frac{1}{8}''$.

F. VI. 001. Wheat from floor of eroded room; also small black seeds like grape-stones.

F. VII. a. Terra-cotta fr. of L.-hand cast of thigh and

leg of human being wearing fur breeches; leg drawn up under thigh in squatting attitude. Length $2\frac{7}{16}$".

F. vii. b. Pottery fr., light red ware; inside orn. with stamped dot-and-circle. $1\frac{1}{10}" \times 1\frac{1}{16}"$.

F. vii. c. Pottery fr., light red ware with burnished outer face orn. by two incised lines between two rows of dots. $\frac{7}{8}" \times \frac{11}{16}"$.

F. vii. 001. Bead of brown paste. Wound round in spiral is incised waved line showing traces of white filling. $\frac{9}{16}" \times \frac{1}{2}"$.

F. vii. 002. Clay sealing, sq., with impression of oval gem. On a straight base line, Ganymede and eagle. To L. on a rocky mass, fig. seated R. seen in profile. Head small with short hair, neck slender; body leans back in easy attitude, and was prob. supported by L. elbow. R. leg stretched out before body, knee slightly bent, foot flat on ground. L. knee raised higher and more sharply bent. R. arm bent at elbow, hand extended horizontally over knees, holding a phiale (?).

To R., eagle, in profile L., stands upright; the L. leg straight with claws on the ground; the R. slightly advanced and bent at knee; talon raised sharply and resting in the hand (or phiale) of seated fig. L. wing half open.

Condition: Of the human fig. the R. shoulder and upper arm are broken away; all the rest is decipherable, but only R. thigh to ankle, standing in very high relief, is well preserved. Of eagle, breast, thighs, R. talon, part of L. wing and tail are preserved, breast and L. thigh in very high relief.

Composition and execution of very fine quality; good Hellenistic workmanship.

The bodily proportions of seated fig. suggest Hebe, but the subject is almost certainly a somewhat androgynous Ganymede. Ganymede seated thus on rocks and feeding the eagle is not uncommonly represented on gems, and also appears on coins of Marcus Aurelius and Commodus struck at Ilion (L. C. Woolley). Clay sealing $1\frac{1}{2}"$ sq.; impression $1" \times \frac{3}{4}"$. Pl. V.

F. viii. 001. Stucco relief fr. Three bosses. Part of bunch of grapes (?). Traces of blue. White stucco. $1\frac{1}{8}" \times \frac{7}{8}"$.

F. ix. 001. Fr. of wooden moulding, lathe-turned, found on surface of ground. Very hard, well preserved. Baluster (?), similar to Kha. i. 0036. $3\frac{1}{2}" \times 1\frac{3}{8}"$.

F. ix. 002. Clay pestle. Disc with smooth slightly convex surface, and at back a projecting handle. Diam. 4", thickness $\frac{3}{4}"$ (with handle $2\frac{1}{8}"$).

F. ix. 003. Stucco relief fr. of opening lotus bud. Three large petals, and above two inner petals. Above central round core shows. Remains of blue paint on white slip. White stucco. $2\frac{1}{2}" \times 1\frac{3}{4}" \times \frac{7}{8}"$.

F. ix. 004. Stucco relief fr. Curl of hair as Kha. ii. N. 0010. White stucco. No colour. $\frac{15}{16}" \times \frac{9}{16}"$.

F. ix. 005. Stucco relief fr. Curl of hair as F. ix. 004. Trace of blue paint. White stucco. $1" \times \frac{9}{16}"$.

F. ix. 006. Stucco relief fr. Palmette, three petals. White stucco. $1\frac{7}{8}" \times 1\frac{3}{4}"$.

F. ix. i. 001. Wooden key of usual type, apple wood, with six pegs arranged in two diagonal rows of three each. See Kha. v. 006. $4\frac{7}{8}" \times \frac{3}{4}"$.

F. x. 001. Haematite quadrilateral cone, highly polished, prob. meant for seal. H. $1\frac{1}{8}"$, base $\frac{13}{16}" \times \frac{5}{8}"$.

F. xi. i. 001. Wooden panel, once painted, with marks of nails which attached it to background. Paint has disappeared except for a few undecipherable traces. $12\frac{7}{8}" \times 4\frac{1}{8}" \times \frac{1}{4}"$.

F. xi. a. Pottery fr., fine red, wheel-made; outer face carefully smoothed and almost burnished. $1\frac{5}{8}" \times 1\frac{7}{16}"$.

F. xi. 001. Nondescript wood fr. Gr. M. $\frac{7}{8}"$.

F. xii. 001. Whisk-broom made of grass, as F. i. 001. Length 1′ $6\frac{1}{4}"$.

F. xii. 002. Fr. of wooden statuette:

L. hand with fingers bent, grasping end of drapery, which is drawn down from lower side of wrist. Little modelling. Drapery behind wrist, and tips of fingers split off. Thumb excessively short. Hole pierced from back to front of wrist.

Arm probably hung straight by side with palm of hand to front. Traces of glue (?) at back of wrist, which may indicate that hand broke off and was attached again by this means, the hole being made at same time for peg to secure it still more firmly.

Hard and in good condition. $5\frac{5}{8}" \times 2" \times 1"$. Pl. XLVII.

F. xii. 003. Fr. of wooden statuette, prob. of child. Leg from above knee to heel. Knee bent at right angles, with straight edge of drapery showing above. Of foot, evidently also at right angles, heel only remains. Hole pierced from corner of heel to front of ankle. Form generally somewhat shapeless and thick. Traces of flesh-coloured paint in fold between calf and thigh. $4\frac{1}{2}" \times 1\frac{1}{2}"$.

F. xii. 004. Fresco panel showing goddess *Hārītī* with her children.

Indo-Persian type of beauty with short rounded face, straight features, eyes very slightly oblique, and dreamy expression of mingled sadness and sweetness. Sits facing spectator, apparently cross-legged, but surface of lower part almost destroyed; L. arm akimbo with hand on thigh, prob. holding stem of flower which appears between L. arm and body; R. upper arm close to body, and forearm horizontal in front, with hand sharply pendent and fingers daintily curled inwards clasping top of long-necked red flask (?) with globular body, which hangs down in front below girdle. Ears long, with pierced lobes greatly distended. Hair black, done smoothly over head and falling behind shoulders, while two long narrow locks curl stiffly forward under eyes. On the head it is decked with strings of pearls, and a jewel orn. over forehead partly broken away.

Dress: a close-fitting short-sleeved jacket, sage-green powdered with round buff spots, set at neck in low band of dark buff orn. with Indian red. Sleeves finished above elbow by similar band, above another of terra-cotta with green and black scroll orn., and edged with short full frills of white or yellow. Lower arm covered with tight-fitting sleeve of under-garment, red, with purple cuff-band (on L. arm) orn. with green scrolls. Turquoise-green stole also about arms. Legs draped with plum-coloured robe, spotted with terra-cotta and green trefoils and pearl-like dots of white. General background, terra-cotta red; circular halo, turquoise-green bordered with terra-cotta red and dark buff.

Five children play about her. One, nude, sits astride R. shoulder; another, in terra-cotta shirt, astride L.; another bestrides R. forearm, and a fourth embraces L. breast as he stands on her girdle; these both nude. The fifth, in green shirt, on extreme L., appears to be dancing. All have features and figs. of grown boys or men.

Flesh throughout washed in with flesh-pink, over white, shaded with a slightly darker tint; all flesh outlines are Indian red, and eyes in black and white only. Hāritī's cheeks seem to have been coloured with another pigment which has destroyed the surface, leaving only the clay below.

Fine conception, but execution unequal; badly damaged over most of surface, but H.'s face and figs. of children almost intact. For interpretation of figure and its comparison with painting on linen found at Yār-khoto, see Foucher, *La Madone bouddhique*, Fondation Piot, Paris, 1910, pp. 16 sqq., with Pl. XIX and Fig. 7 showing mural painting *in situ*. 2′ × 2′. Pl. XIII.

F. xii. 005. Fresco panel showing standing Bodhisattva (*Avalokiteśvara*), ¾ R.; R. hand with palm upturned before breast supporting long-necked flask, L. hand down as though gathering robe together. Fig. slim and generally of Indo-Persian type. Upper half nude except for dark pink stole, striped with white, twined on arms; knots of white drapery hanging behind shoulders; necklet, chain, armlets, and bracelets. Flesh light pink shaded with darker pink and a light burnt red. Below hips fig. is draped in a variegated robe gathered closely round legs and falling in pleated folds between. Intermingling colours of robe represented by cross stripes of white and red, and (in another direction) green and black. Head wears tiara of open lotus with Dhyāni-buddha in centre and pearl border; hair long, falling behind shoulders, is dull dark brown heavily lined with black. Straight eyes downcast; long straight nose; elongated ear, but no ear-ring. All outlines of flesh in light burnt sienna, which is also used for iris of eyes and eyebrows; but the latter (besides nostril, line dividing lips, and L. side of face) are strengthened with black.

Behind is narrow oval vesica and circular halo. Ground of vesica light green, of halo greenish grey; both bordered with inner band of dark pink and outer border of circular medallions in buff outlined with red and having alternately red and green centres.

Background of whole dark red, with lower part of dark blue lotus bud showing in L. top corner, and small seated Buddha on R. Immediately above on wall stood F. xii. 006.

Close approach to Indian elements in Graeco-Buddhist art particularly noticeable, e. g. in the variegated robe, forms of jewellery and flask, treatment of drapery and angular folds down front of robe. Dark brown for the hair is not found elsewhere amongst the wall-paintings of Collection, but is found on hair of Lokapālas in some of Ch'ien-fo-tung paintings (see Ch. 0035; xx. 0011; lv. 0018); for a lighter brown used for iris of eyes as in frescoes from M. iii, cf. M. iii. 003.

Surface much worn. 2′ 7″ × 1′ 2½″. Fresco *in situ*, Figs. 312, 313. Portion removed, Pl. CXXV.

F. xii. 006. Fresco fr. from wall immediately above F. xii. 005; shows lower part of fig. standing on lotus (pale green and black, with brown centre). Dark red background with three large lotus buds (black and pale green) in field. Pale green robe with dark red border and stole of dark pink, white, and black check, ends of which remain. Vesica has ornamental border, decorated with attendant figs. in panels; parts of two on pale green and dark red grounds showing on L. side. Work rough, and green paint almost entirely lost. 11″ × 14″.

F. xii. 007. Fresco fr. showing seated Buddha from Buddha-diapered portion of south-east wall in F. xii. Hands together in lap, with thumbs touching, head ¾ L. Pink lotus-throne, red-brown robe, green vesica with dark brown border, circular pink nimbus. Flesh white, shaded with burnt sienna and outlined Indian red. Background pale green. To L., knee and part of vesica (red and white) of next fig. Coarse work. 18″ × 10½″. For fresco *in situ*, see Fig. 314.

F. xii. 008. Fresco fr. showing seated Buddha from wall above F. xii. 007, and in same style. Blue lotus throne, pale green robe bordered red. Whites of eyes have blue-grey line along lower part. Black eyelashes, elongated. Vesica pink bordered with green; halo shaded pink, bordered with blue; rectang. background red. To L. is left side of second fig. in red robe on pink lotus with blue vesica; rectang. background pale green. Above, traces of third subject. Colours rich; work rather rough. 1′ × 1′ 7″. For fresco *in situ*, see Fig. 314.

F. xii. 009. Fresco fr. from portion of north-east wall adjoining the statue seen in Fig. 296. R. half, upon dark red ground, shows twining stem and tendrils in dark grey from which spring large lotus bud and fully opened lotus. Petals white near flower centre, light copper-green in outer parts, outlined black. Background sprinkled with small floral sprigs in white. Down L. side, on lighter red ground, are three Buddhas seated in meditation on lotuses, with lotus-petal vesicas. Hands of two upper covered by robe.

Painted in buff throughout, with dark red outlines, eyes, and hair; copper-green on petals of Padmāsana,

edges of robe, and borders alternately of halo and vesica. At bottom is larger similar Buddha, having dark red robe, white flesh, copper-green halo, and vesica of flames (?) in buff, red, and green, with bead border.

Along top are petals of larger Padmāsana. Rough work. 1′ 10½″ × 11″.

F. xii. 0010. Fresco fr. from frieze at foot of wall in south corner. Lower part shows red and white, and blue and white, trefoil flowers with white tendrils scattered on maroon ground; also a lotus bud, red outlined black. Above, a green and blue lotus bud on red ground. 16½″ × 12″. For position *in situ*, see Fig. 314.

Section III.—FROM DOMOKO TO KHOTAN

Site of *Kara-yantak.*

From Farhād-Bēg-yailaki I moved on March 13 south past the present oasis of Domoko in order to examine remains which Rōze and his companions had traced at a point known as Kara-yantak in the area of scrub-covered low sand hillocks stretching east of the stream of Domoko. It proved to be situated less than a mile and a half due east of Mazār-toghrak, the site explored in October, 1906, and about the same distance to the south-east of the great dyke at the head of the Domoko-yār.[1] The remains were those of a completely destroyed Buddhist shrine, which in plan and decoration must have shown the closest resemblance to the main temple of Khādalik, though probably smaller. The clearing of the sand which covered the remains to a height of 9–10 feet in most places (Fig. 319) had not proceeded very far before it became clear that here, just as Khādalik, the ruined structure had been worked as a quarry for timber. With the exception of a few feet length of foundation beams and the fragments of posts, etc., seen in Fig. 319, all pieces of wood which could be of use had been removed, obviously before heavy sand had accumulated at the ruin. Small pieces of painted wood chipped off from posts, etc., were plentiful. On the other hand, there was no sign of destruction by fire.

Remains of frescoed wall, relievo fragments.

Apart from pieces of frescoed wall plaster, K.Y. 002–3; I. 0018, showing a diaper of small seated Buddha figures and part of a large vesica, nothing remained of the cella walls, no doubt built of timber and wattle. About 10 feet east of where these plaster pieces cropped out there were found remnants of what evidently had been a central image base in stucco. Near this, amidst débris of shattered wood and plaster, were found small relievo fragments in stucco including the heads of Gandharvī-like figures (K.Y. I. 001–2, Plate CXXXIX), closely allied in style to those recovered at Khādalik; a wooden Pōthī board with a faded inscription in cursive Central-Asian Brāhmī, and seven clay impressions from an intaglio stamp showing a Bodhisattva seated on a lotus throne and modelled in purely Indian style (for a specimen see K.Y. I. 0010, Plate CXXXIX). A clay mould, struck from the relief of one in this series, evidently for the sake of producing more of these votive offerings, is seen in K.Y. I. 0016 (Plate CXXXIX). In the same place were found the fragment of a Buddha statuette in wood, K.Y. I. 0020 (Plate CXXXVIII), measuring a little over one foot across the knees, and the badly effaced painted panel, K.Y. I. 0021. Of a small chapel, which seems to have adjoined on the south the approach to the passage round the cella, there survived two image bases in stucco. Remains of a frescoed band about 6 inches high at the foot of one of them showed kneeling figures of a family group, evidently of the donor, the whole carefully painted but much injured by 'Shōr'. From this was recovered the fragment K.Y. II. 001.

Date of abandonment.

The conclusion drawn from these scanty art remains as to the date of this shrine, and probably of its abandonment also, which is approximately the same as that determined for the Khādalik temples, received striking confirmation by the discovery on the floor of a well-preserved coin of the *Ch'ien-yüan* period (A. D. 758–9), showing no sign of wear. As in the case of Khādalik and Mazār-toghrak, it appears very probable that this shrine, too, and the settlement likely to have existed around it were deserted about the close of the eighth century. The antiquarian and geographical interest presented by this simultaneous abandonment has already been discussed.[2]

[1] See above, pp. 203, 205 sq.

[2] See above, pp. 207 sqq.

315. REMAINS OF RUINED BUDDHIST SHRINE F. XII, EMBEDDED IN TAMARISK-COVERED SAND CONE, FARHĀD-BĒG-YAILAKI.

316. NEW CULTIVATION ON GROUND RECLAIMED FROM SCRUBBY DESERT BETWEEN DOMOKO AND GULAKHMA.

317. EXCAVATION PROCEEDING AT SOUTH-WEST WING OF RUINED MONASTIC QUARTERS, F. II, FARHĀD-BĒG-YAILAKI.

318. TAMARISK-CONE WITHIN NEW CULTIVATION BETWEEN DOMOKO AND GULAKHMA.

319. REMAINS OF RUINED BUDDHIST SHRINE, AMIDST TAMARISK-COVERED HILLOCKS, KARA-YANTAK, IN COURSE OF EXCAVATION.

320. GROUP OF MY PARTY TAKEN AT ULŪGH-MAZĀR.
From left to right: Ibrāhīm Bēg; Chiang Ssŭ-yeh; self with 'Dash II'; Jasvant Singh; Rai Bahādur Lāl Singh; Naik Rām Singh.
Dead tamarisk-cone in background.

From Kara-yantak I had to pay a rapid visit to Keriya, the district head-quarters, in order to arrange with its magistrate, a very intelligent and attentive Mandarin of the old type, for the help which I knew would be essential for the explorations I planned during the summer in the high K'un-lun ranges south of Polur. Having assured myself well in advance of the needful support, I returned to Domoko by March 19, and on the same day proceeded into the desert north-westwards in order to revisit the old sites around Ulūgh-mazār. On the way through Domoko and Gulakhma I had occasion to make interesting observations as to expanding cultivation and increasing prosperity on this ground, which I knew well from my former visits, and where, in view of geographical and antiquarian questions previously discussed, all changes in the occupied area deserve special attention. Since my visit of 1906 a large Bāzār had sprung up at Domoko, and to the east of it ground about Chigillik (Map No. 31. A. 4), then completely waste, had been brought under permanent irrigation by means of a new canal. Its surplus water was at the time being turned to use for the reclamation of open patches of ground at and above the Khādalik site.

Expanding cultivation about *Domoko*.

Westwards, too, I found this extension in progress. The belt of scrubby desert with tamarisk-cones which before separated the village tracts of Domoko and Gulakhma was being rapidly reduced by newly levelled fields ready for irrigation, as seen in Figs. 316, 318. It was curious to observe the way in which irrigation channels, carried round the foot of the tamarisk-cones, were used for gradually removing the fertile loess dust accumulated in them centuries ago and spreading it over the new fields. This extension was being effected mainly by more careful use of the *kara-su* obtained from the springs in the 'akins' of Ponak and Gulakhma (Map No. 32. A. 1). Thus the latter village area had, according to reliable local information, doubled its population during the last sixteen years. This increase was all the more deserving of notice because there were complaints of the summer floods (*ak-su*) from the mountains having been generally below the mark during most of this period. It was clear that increased pressure of population and other economic factors play an important part in these changes affecting what might otherwise seem classic ground for watching 'pulsatory desiccation' at work.

Extension of irrigated area.

In *Ancient Khotan* I have already fully discussed the reasons which have led me to locate the site of Hsüan-tsang's P'i-mo and Sung Yün's Han-mo at the extensive débris areas to be found to the north of and around the desert pilgrimage place known as *Ulūgh-mazār* or *Ulūgh-ziārat*, 'the holy shrine' (Map No. 27. D. 4).[3] My renewed visit to this ground has fully confirmed my belief in the correctness of this identification and enabled me to realize better the great extent of the 'Tatis' which lie to the south and south-east of Ulūgh-mazār. Following this time under Mullah Khwāja's competent guidance a direct line from Lachin-atā's Mazār (Map No. 31. A. 4) to Ulūgh-mazār, I found, after going about a mile, the whole ground thickly covered at short intervals with débris of the typical kind, fragments of old pottery, hard-burned bricks, slags, etc., wherever the eroded soil lay bare between dunes and tamarisk-cones. The same observation applies to the ground to the south and south-west of Ulūgh-mazār for a distance of about a mile and a half. At numerous points of these 'Tatis' the abundance of human remains laid bare by wind-erosion indicated old cemeteries. That these belonged to Muhammadan times was made quite certain by finding in several places rows of fairly intact skeletons laid regularly with the feet to the south, as required by orthodox Muslim custom. This further proof that the site continued to be occupied down to the Muhammadan period is of special value in view of the probable identity of Marco Polo's 'Pein' with P'i-mo.[4]

Débris areas around *Ulūgh-mazār*.

Muhammadan cemeteries.

The fresh numismatic evidence now secured from these 'Tatis' fully agrees with the conclusion arrived at on my former visit, and at the same time shows that the occupation of this area must have

[3] Cf. *Ancient Khotan*, i. pp. 462 sq.

[4] Cf. *Ancient Khotan*, i. pp. 457, 463.

Numismatic evidence of early occupation.

already been of old date when Sung Yün visited Han-mo. While among the coins actually picked up there on my own visit or R. B. Lāl Singh's preceding reconnaissance one is a Sung dynasty piece of A. D. 1102–7 and another a Muhammadan coin ascribed to the fourteenth century, there were secured also some much-worn *Wu-chu* pieces and one coin which seems to be of the Sino-Kharoṣṭhī class.[5] These finds of early coins are of special interest because they bear out Sung Yün's statement with regard to the antiquity of the shrine with the miracle-working Buddha statue which he visited 15 li to the south of Han-mo, i. e. at the site now marked by the pilgrimage place of Ulūgh-mazār. He mentions that of the multitude of votive banners he saw there about half showed dates of the Wei dynasty (A. D. 386–534), while one was of the period A. D. 384–417.[6]

Ruined fort north of *Ulūgh-mazār.*

During my halt of one day at Ulūgh-mazār I was able to make an excursion northward to the nearest portion of the Uzun-tati débris area, and in the course of it found the remains of a roughly built structure, undoubtedly of Muhammadan origin and probably a mosque, about half a mile to the north of the ruined fort described in *Ancient Khotan*.[7] As other traces of later occupation were found in the immediate vicinity, the view previously expressed as to the late origin of the fort has been strengthened. It may well date from an attempt made to re-occupy this ground long after Marco Polo's 'Pein' was abandoned to the desert.

Ulūgh-mazār was the last place which saw my whole party reunited at the close of our winter campaign (Fig. 320). On March 22 I moved south to the oasis of Chīra, and from there Naik Rām Singh, my 'handy-man', started eastwards in the company of Ibrāhīm Bēg on the long journey which was to take him back to the temples of Mīrān—and from which he returned blind three months later.

Oasis of *Chīra.*

Chīra, reckoned at no less than 3,500 households, is a large and flourishing tract with cultivation dependent mainly on the abundant *ak-su* which its river brings down straight from the slopes of the great glacier-crowned massif of the Muz-tāgh Peak. Here, too, the extension of the irrigated area was proceeding rapidly, the annual increase being reported at fully a thousand Chinese *mou*. Of the way in which this recent reclamation of land, centuries ago abandoned to the desert, is bound to affect any old remains there surviving, I had a good illustration on visiting the ruins known as *Rawak*, about a mile to the west of Oghrelik, where my camp stood. There, in the midst of new fields, I found the walls of a relatively large structure, built of stamped clay and now crumbling under the effect of the heavy flooding which the ground all round had received from a recent canal extension. The extant portions of the structure comprised a hall measuring 48 feet by 37, with three rooms of considerable size adjoining at its back. There was no clear indication

Rawak ruins.

[5] See below, Appendix *B*. I may add that of five coins which were given to me at Keriya as having been brought from the 'Tatis' near Ulūgh-mazār two are T'ang pieces (*K'ai-yüan*), while the rest are of Sung dynasty issues, ranging from A.D. 1017–1107. Of nine more coins received from Domoko in 1906 five are *Wu-chu* 'cash', tentatively ascribed to the fifth century, three T'ang pieces of A.D. 758–9, and one probably a mediaeval Muhammadan coin.

[6] Cf. Chavannes, *Voyage de Song Yun*, pp. 14 sq.; above, p. 841.

[7] Cf. *Ancient Khotan*, i. p. 462. In Map No. 27. D. 4 the position of the fort has by an error of compilation been shown to the north-north-east, instead of east-north-east of Ulūgh-mazār. The position of the débris area marked north of the fort must be shifted accordingly. The direction of the dry river-bed reached further on and connected with the present Ponak-akin needs also correction, as it has a more northerly bearing.

[The correct positions of these features relative to Ulūgh-mazār, Old Domoko, etc., will be found duly indicated in Sheet No. 14 of the final Atlas containing all surveys made on my three journeys, 1900–15.]

This dry bed is very clearly marked with an average width of about 60 yards, while the ridges of close-set tamarisk-cones on either side leave clear a depression fully three times as wide. Judging from the appearance of the dead *kötek* lining the banks and the 'Yārdangs' within the bed, the latter must be of considerable antiquity. The possibility of its having once carried the waters from the united streams between Domoko and Chīra towards Dandān-oilik, as first suggested by Professor Huntington, deserves careful consideration.

to be found either of its age or of its purpose. Whatever ground near by had not as yet been brought under cultivation showed far-advanced wind-erosion, with the usual small pottery fragments marking former occupation. About 1½ miles to the north-west, amidst old tamarisk-cones now completely bared of their bushes and roots for the sake of supplying Chīra with fuel, I was shown an area about a quarter of a mile square thickly covered with ancient looking pottery débris. From the soft loess dust of the ground numerous tiny fragments of stucco relievos were picked up, of which those shown in the List below are specimens. These fragments were all in hard white stucco, and must have belonged to the wall decoration of a Buddhist shrine completely destroyed long ago and probably dating from T'ang times. Relievo frs. from *Maira-tati.*

From Chīra I moved on March 24 westwards to regain the extreme edge of the Khotan district at Lop. I had followed this main caravan route between Keriya and Khotan before, and could therefore appreciate the change which the ground immediately to the west of Chīra had undergone through extended cultivation. The few straggling fields of Kankal seen in 1901 had grown since then into a compact stretch of cultivation joined up with the *kōne yer*, or 'old land', of Chīra, and extending it two miles further. Beyond this again the new little oasis of Khalpat had grown up around what was before a solitary Langar by the roadside, and now stretched its fields and young avenues of poplars for a distance of about 2 miles. I need not insist on the lesson which such observations contain for the student of the past of this region. It was interesting, too, to learn, after passing Yailaghan-langar (Map No. 27. c. 4), of the project which the people of the Sampula canton were fondly discussing at the time. It was planned to bring a new canal from the Yurung-kāsh to the great plain of loess and fine gravel which stretches level but utterly barren on both sides of the road west of Yailaghan-langar. A subsequent survey of the proposed canal line, which at the request of the Sampula Bēgs I had carried out by R. B. Lāl Singh, showed that the project as far as levels were concerned was well within local resources, provided a big *tugh*, or dyke, like that on the Domoko-yār were maintained to carry the water diverted from the huge summer floods of the Yurung-kāsh across the dry bed coming from the hills above Achchik. It was but one among many illustrations of the big changes which increasing population and an efficient administration might bring about in the Khotan region, independent of climatic variations. Extended cultivation west of Chīra. Projected new canal from Yurung-kāsh River.

From Lop-bāzār I proceeded northward in order to examine the remains which Maḥmūd, one of my 'Taklamakānchis', had come upon on a desert crossing from Imām 'Āsīm's Mazār to the shrine of Sultān Waiskaram (Map No. 27. B. 4). The route to the latter place beyond the northern edge of the fertile Hanguya canton followed a marshy stream bed which receives the overflow waters of the easternmost canals from the Yurung-kāsh in addition to *kara-su* from numerous springs. This bed, running to the north-east, was said to find its continuation in a belt of reed-beds and jungle visited by shepherds for a distance of two to three days' journey beyond Sultān Waiskaram. As water in wells can be found further on, too, in the direction of Dandān-oilik, this belt of vegetation provides the most direct and convenient approach to that ruined site from the side of Khotan, and deserves to be surveyed by some future traveller. Two old mounds, known also to the 'Shaikhs' of Sultān Waiskaram-mazār and both situated amidst tamarisk-cones to the west of it, proved to be those of completely ruined Stūpas. One within about a mile's distance had a much-decayed base, about 21 feet square, rising to a height of 7–8 feet. Its sun-dried bricks measured 18″ × 10″ × 3″. Of the second mound, about two furlongs further west, only 3 feet or so emerged above the drift-sand. On clearing this to the ground-level there came to light the lowest base of a Stūpa, about 23 feet square and 3 feet high, still retaining in places mouldings in white stucco. What remained of the upper bases, to a height of some 7 feet more, was too badly decayed to permit of any reconstruction. Ruined Stūpas near *Waiskaram-mazār.*

Remains at east end of *Hanguya Tati.*

Going west-north-west of this second Stūpa, two big ridges of sand rising to 50–60 feet had to be crossed before the structural remains reported were reached after about 1½ miles amidst dunes rising to 15–20 feet. Wherever on the way small patches of bare ground were met, they were covered with old pottery débris. The same was the case on the open expanse of drift-sand reached after crossing those high ridges. To the west and south-west it extended unbroken, forming manifestly a part of that great 'Hanguya Tati' which I had first visited in 1901 at the Stūpa of Arka-kuduk and subsequently struck again in 1906 on my way to the Ak-terek site.[8] In one place the clay walls of a house eroded to within a foot or so of the ground could be traced. In two of its rooms there were fireplaces spared from the thickness of the wall to a depth of 2 feet, and apparently different in construction from those seen at Dandān-oilik, Khādalik, and elsewhere. About 20 yards to the south a débris heap, about 40 feet in diameter, of charred wood and burned clay marked the site of what was probably a temple. It had obviously been destroyed by fire and its remains since frequently searched for 'treasure', a wood-cutter's track passing close by.

Increased irrigation east of Yurung-kāsh River.

My subsequent marches took me through the intensively cultivated village tracts of Hanguya and Sampula to Bīzil (Map No. 28. A. 1) on the right bank of the Yurung-kāsh where it issues from the mountains. On the way I was able to collect useful information about the elaborate system of canals which irrigate the Khotan cantons situated to the east of the Yurung-kāsh and now comprised in the separate *hsien* of Lop. But this is not the place to record it nor to detail the instructive observations made when inspecting, in the company of local Bēgs and Mīrābs, the work already started on the new canal which skirted the foot of the gravel glacis to the south and was ultimately to bring water to the 'Sai' of Yailaghan.[9] It must suffice to state that there was evidence on all sides of the steady increase which the area under cultivation in this important portion of the Khotan oasis had been undergoing during recent years, both by 'new land' on the desert edge being brought under irrigation and by the reclamation of *shōrluk*, or salt-impregnated marshy ground, previously neglected within the old cultivated area. If these conditions should continue for some time, the careful record made in our maps of the cultivation limits, wherever they could be accurately observed, may prove of great interest hereafter. It will help in gauging the range of the latest of those changes in the economic history of Khotan which for earlier periods archaeological research must assume, but cannot hope accurately to determine.

'Tati' of *Jamada* revisited.

From Bīzil I crossed to the west bank of the Yurung-kāsh in order to revisit the site of 'Mount Gośṛṅga' and some remains reported in its neighbourhood. The march across the stony 'Sai' separating here the two main rivers of Khotan was done in a raging sand-storm which made observation very difficult. But after crossing the Yurung-kāsh, then carrying water 1–1½ feet deep over some 100 yards only of its mile-wide bed, we passed the head of the canals which irrigate the cantons on the left bank of the river, and then reached a débris-covered waste forming part of the 'Tati' of Jamada. The latter had already been visited by me on my first journey,[10] but was found now to have a continuation for about a mile further to the south-west.

To this there had been brought recently the extension of a new canal which since 1901 had been opened above Chalma-kazān and had turned this old site into an irrigated area owned by the

[8] See above, pp. 134, 140 sq.

[9] It was from a point of this 'Sai' about a mile to the south-west of Kotāz-langar (Map No. 27. A. 4) that the few stucco relievo fragments brought to me towards the close of my stay at Khotan and described in the List below (Samp. 001–5) were subsequently ascertained to have been obtained. This small site of a Buddhist shrine, still marked by a Muhammadan Ziārat in its close vicinity, was visited by me early in December, 1913.

[10] Cf. *Ancient Khotan*, i. p. 233. For this ground between Yurung-kāsh and Kara-kāsh the map attached to *Ancient Khotan* should be consulted. It is left blank in Maps Nos. 20, 21 as having been completely surveyed already on the former journey.

'Wang', Bēg of Kara-kāsh.[11] In the course of levelling the ground for the fields of this young colony, remains of a ruined 'Būt-khāna', or temple, were said to have been struck. The pieces of hard stucco relievos then found had been carried off by Muḥammad Sharīf, a 'treasure-seeker' and antique dealer of Khotan, and from him I was subsequently able to acquire them. They will be found fully described in the List below. The examination of all these relievo pieces conclusively shows that they had been hardened by accidental burning, just as those recovered at Ak-terek, while their style leaves no doubt that they had belonged to the wall-decoration of a Buddhist shrine of approximately the same period.[12] I may add here that among the seventeen coins which Muḥammad Sharīf brought me as having been found at Chalma-kazān in different places of newly cultivated ground, six are Sino-Kharoṣṭhī and two Wu-chu pieces, while the rest are of T'ang issues down to the Ta-li period (A.D. 766–80).[13] Stucco relievos from *Chalma-kazān.*

The Kohmārī hill, the 'Mount *Gośṛṅga*' of Hsüan-tsang and the 'Cow's head (*Gośīrṣa*) Hill' of other accounts, Chinese and Tibetan, has already been fully described by me.[14] After reaching it I searched once again the gravel-covered ridge above the sacred cave where it falls off with precipitous cliffs towards the Kara-kāsh River bed (Fig. 31). But nowhere could I trace any indication as to where the Buddhist convent mentioned by Hsüan-tsang and other shrines of this holy spot might have stood. Of the small grottoes lower down on the face of the cliff, which since 1900 had been made accessible, I have already had occasion to give details.[15] There, too, I have described the rock-cut tomb in the perpendicular cliffs facing Faizābād which I now was able to examine more closely (Fig. 32).[16] Then after fully a year and a half year's absence I regained, on March 30, Khotan town, and there had the great satisfaction of seeing all my antiques sent from Kuchā safely stored at my old quarters, in Ākhūn Bēg's country house. *Kōhmārī hill.*

OBJECTS EXCAVATED AT KARA-YANTAK

K.Y. 002. Fresco fr., part of diaper showing three rows of Buddhas seated in meditation (one, four, and three). Robes red against light brown oval vesicas bordered with bands of red and white squares (simplification of lotus-petal border). Intervening spaces pale green, with circular rosette—black, white, dull red, and buff—in each.

Above towards R. appears lower part of main subject. On maroon background is fig. seated cross-legged, nude except for red loin-cloth and light brown stole. His hands are folded before his body, which is open (?) like that of old man in Kha. i. c. 0097; his head is lost. Behind him on L. are red lotus buds, and on R. end of a semicircular lotus pond with brown stone (?) border. Good condition. 1′ 2″ × 10″.

K.Y. 003. Fresco fr. painted with diaper of seated Buddhas; three complete rows and lower part of fourth. In top row and in two lower Buddhas are framed in elliptical borders of alternate red and white colouring as K.Y. 002; the quadrangular interspaces furnished with varieties of four-petalled flowers. Second row from top are in rectangles, red, green, and buff, and have Padmāsanas. Flesh yellow throughout; robes generally red, one dark brown and one buff. Very rough work. 15″ × 18″.

K.Y. i. 001. Stucco relief fr. Head of Gandharvī (?). Hair painted black and parted in middle. From centre of crown two locks are brought forward over brows, pointed like a pair of leaves. From under these locks hair is gathered back from temples along sides of head. Ears have short lobes. Eyes prominent, and half closed; eye-brows black. Dark red line encircles eye-socket above and below lids, and outlines lower part of nose and ears. Lips also were dark red, flesh pink, pupil of eye a black

[11] Cf. *Desert Cathay*, i. p. 167. Regarding the antiquity of the Chalma-kazān site and the probable location there of the *Tsan-mo* temple mentioned by Chinese accounts and also the Tibetan 'Annals of Li-yul', cf. *Ancient Khotan*, i. pp. 233 sqq.

[12] Among these stucco relievos, fragments of standing Buddha figures are particularly numerous; see Chal. 001. a–21. Other pieces deserving special notice are: the plaque of a small seated Buddha, Chal. 0027; the Bodhisattva head, Chal. 0042, Pl. X; the fine floral ornaments with acanthus and palmettes, Chal. 0055–6, 0059, Pl. X; the antelope head, Chal. 0051, Pl. CXXXIX. On account of their materials may be mentioned the stone figure of a flying *putto*, Chal. 0037, and the terra-cotta pieces of a 'Buddhist rail', Chal. 0038–41, etc.

[13] See below, Appendix *B*.

[14] Cf. *Ancient Khotan*, i. pp. 185–90.

[15] See above, p. 95.

[16] See above, p. 96.

dot, ball white. Eyelashes shown by black line on edge of lids. Red clay. Chin to crown 2″. Pl. CXXXIX.

K.Y. I. 002. Stucco relief fr. Head of fig. like K.Y. I. 001. The two front locks are absent. Hair rises straight from forehead and curls over like two horns above ears. Flesh more white than pink. Red line under chin. Other details as in K.Y. I. 001. Red clay. Chin to crown 2″. Pl. CXXXIX.

K.Y I. 003. Stucco relief fr. Head perhaps from fig. in round as back of hair is painted. Head shown as shaven except for back of head, from which hair spreads forward in a curve over each ear, and for a triangular lock which starts from crown (apex) and falls over forehead. Otherwise like K.Y. I. 001. Bad condition. Red clay. Chin to crown 2″.

K.Y. I. 004. Stucco relief fr. Head of Buddha. Shows traces of colour. Lips, crease in chin, and interior of ears red; hair and eyebrows black. Halo gone. Hair treated by close-set shallow holes. Cf. Chal. 002. White stucco. Chin to crown $1\frac{3}{4}$″.

K.Y. I. 005. Stucco relief fr. of standing Buddha. L. side from waist to ankle and L. hand preserved. Cf. Chal. 001. b. Robe painted dark grey. L. hand hanging by side holds loop of drapery. White stucco. Waist to ankle $3\frac{1}{8}$″.

K.Y. I. 006. Stucco relief fr. of standing Buddha. Cf. K.Y. I. 005. From middle of chest to middle of thighs. Vesica and L. hand gone. R. hand upraised prob. in attitude of protection. Robe painted dark grey. White stucco. H. 3″.

K.Y. I. 007. Stucco relief fr. of Gandharvī flying R.; cf. *Kha. i. E. 0028. Below waist seems to wear girdle with tasselled border painted red. Garland of twisted drapery held in loop across body. Traces of red on legs, and of green on background, broken off close to fig. White stucco. 2″ × $2\frac{3}{4}$″.

K.Y. I. 008. Stucco relief fr. of Gandharvī flying L. Nude, except for tight girdle with tasselled edge, painted in red. Garland of twisted drapery held looped across body; cf. Kha. i. c. 0039. All above waist and below knees missing. White stucco. $3\frac{1}{2}$″ × 2″.

K.Y. I. 009. Clay votive impression; clay lump with flat back and rounded sides; in shape oval with flattened base and pointed top, i.e. roughly a vesica. In centre deep impression of intaglio stamp. Bodhisattva seated on lotus throne. R. leg hangs down in front, but rests on separate small lotus. R. hand on R. calf in 'attitude of charity'. L. arm hangs loosely by side. L. hand resting on edge of throne holds long-stemmed lotus with three narrow curling leaves and fully-blown blossom resembling carnation. Bangles on upper arms. Body nude except for very light stole crossing from L. shoulder to R. hip; jewelled girdle with loin-cloth; beads round neck. On head, top-knot of hair and tiara. Distended ear lobes. Horseshoe nimbus with jewelled border. Style purely Indian. Prob. Avalokiteśvara; cf. Foucher, *Iconographie bouddhique*, Pte. I, Pl. V. 2.

Rest of die occupied with vesica background, which is covered with small curls prob. representing flames. From same mould are K.Y. I. 0010–13; cf. K.Y. I. 0014, 0016. Impression $2\frac{1}{4}$″ × $1\frac{3}{4}$″, clay $4\frac{3}{4}$″ × 3″ × *c.* $1\frac{1}{8}$″.

K.Y. I. 0010. Clay votive impression of Bodhisattva, from same mould as K.Y. I. 009. Above fig. is oblong hole that pierces slantingly to back of clay. In this were remains of wooden peg. Good impression. Pl. CXXXIX.

K.Y. I. 0011–13. Clay votive impressions, from same mould as K.Y. I. 009, but less distinct.

K.Y. I. 0014. Clay votive impression of Bodhisattva. Bad impression from a poor mould taken from one of series K.Y. I. 009–13. Impression $1\frac{1}{2}$″ × $1\frac{7}{8}$″, disc $2\frac{3}{8}$″ × $2\frac{1}{8}$″.

K.Y. I. 0015. Clay votive impression, from same mould as K.Y. I. 0014. Corner broken, bad impression. $1\frac{3}{4}$″ × $2\frac{1}{8}$″.

K.Y. I. 0016. Clay mould for stamping figs. like those on K.Y. I. 0014–15. Struck from relief of series K.Y. I. 009–13; a bad impression. Flower lost at edge; details blurred. $2\frac{1}{8}$″ × $1\frac{1}{2}$″. Pl. CXXXIX.

K.Y. I. 0017. Stucco relief fr. Lotus orn. Flower with three rows of petals and dotted centre. Remains of pale green paint on petals. In front, seed-vessel hangs out in fashion of A.T. v. 0039. Red clay mixed with fibre. $2\frac{1}{2}$″ × $2\frac{5}{8}$″.

K.Y. I. 0018. Fresco fr. In fine hard stucco, showing impress of reeds behind. Paint is laid on over thin facing of white plaster ($\frac{1}{10}$″ thick). In some parts where the plaster is broken (but not in all) a wash of red or green appears under the plaster on the face of the stucco.

Fr. from vesica or background of large fig., showing on L. part of incurving leaves of straight lotus border (cf. Kha. vii. 001 and A.T. v. 0032), and within, linked elliptical vesica panels containing seated Buddhas, as in Kha. i. E. 0050. Lotus wreath white, shaded with grey, and with grey rib; outlines Indian red. Background of inner border, light green; vesicas light buff; Buddha robes faded red; vesica borders white, outlined Indian red; outlines of robes and Padmāsanas black. Rough work. $8\frac{1}{4}$″ × $9\frac{1}{2}$″ × $\frac{5}{8}$″.

K.Y. I. 0019. Stucco relief fr. of Gandharva flying R. Head, shoulders, and R. arm (outstretched and bent upwards at elbow), and L. side of halo preserved. Hair (long), eyes, eyebrows, moustache and imperial (?), black. Flesh and halo white. Red clay mixed with fibre. $1\frac{5}{8}$″ × $1\frac{7}{8}$″.

K.Y. I. 0020. Fr. of wooden statuette. Lower limbs of seated Buddha. Feet are crossed, soles upward, and toes rest on thighs. Folds of drapery rendered by parallel ridges alternately narrow and sharply curved in section,

and broad and shallow. Knee to knee $12\frac{5}{8}''$, knee to ground $2\frac{3}{4}''$. Pl. CXXXVIII.

K.Y. I. 0021. Fr. of painted wooden panel, showing upper part of two of a row of Buddhas seated. Background red; vesicas and haloes green and white respectively, counterchanged in adjoining figs.; flesh white, outlined red. Traces only. $7\frac{1}{4}'' \times 3\frac{3}{4}''$.

K.Y. II. 001. Fresco fr. from foot of stucco image base, showing on R. head and part of arm of fem. fig. Black hair drawn smoothly down sides of face and done in roll on neck. Traces of buff robe. Behind head and shoulders of smaller fig. (child). Black hair close to head, and done in double-leaf tuft on top. Background white. Much worn; stucco mixed with straw. $5\frac{1}{2}'' \times 6''$.

OBJECTS FOUND ON ERODED GROUND NEAR LACHIN-ATĀ-MAZĀR

Lach. 001. (W. of). Glass fr., flat, moulded. Edge olded over; outline curved. Prob. from rim of vessel. $1'' \times 1'' \times \frac{1}{24}''$.

Lach. 002. String of thirteen beads. Two, cylindrical, broken, of charred wood; two, cylindrical, of grey paste spotted or striped with black; one, double ball, of same; one, flattened spheroid, of blue glass; two, flattened spheroid, of yellow paste; one fragmentary, of paste covered with turquoise glaze; four stone pendants, irregular shapes. Gr. diam. $\frac{7}{16}''$.

Lach. 003. (W. of). Pendant of yellow pebble, cut to flat pear-shape and polished. Broken off through suspension hole at narrow end. $3\frac{1}{4}'' \times \frac{1}{2}'' \times \frac{3}{16}''$.

Lach. 004. (W. of). Fr. of yellow cornelian. Gr. M. $\frac{1}{4}''$.

Lach. 005. (W. of). Pottery fr., perhaps from handle of pot. Grey clay, covered by brilliant brown glaze, which has come off in places. $1'' \times \frac{9}{16}''$.

Lach. 006. a–g. Small nondescript bronze frs.

OBJECTS FOUND ON ERODED GROUND IN THE VICINITY OF ULŪGH-MAZAR

U.M. 001. Pottery fr. of grey-brown ware, orn. with two concentric bands of stamped orn. made with nine-toothed punch. Hand-made. Ill-levigated clay. $2\frac{1}{16}'' \times 2\frac{1}{16}'' \times \frac{1}{4}''$. Pl. IV.

U.M. 002. Pottery fr. of light red ware orn. with band of comb-drawn wave pattern between two incised lines. $2\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

U.M. 003. (S. of). Half of pottery ring. Hard grey clay. Diam. $\frac{7}{8}''$, thickness $\frac{1}{4}''$.

U.M. 004. (S. of). Pottery fr., grey clay with fine dark green glaze inside and out. Probably Chinese. $1\frac{1}{8}'' \times 1'' \times \frac{3}{16}''$.

U.M. 005. (S. of). Pottery fr., drab ware, orn. outside with zigzags in relief with triangular dots at widest point of the angles. Much sand-worn. Hand-made. $1\frac{1}{2}'' \times 1\frac{1}{8}'' \times \frac{3}{16}''$. Pl. IV.

U.M. 006. (S. of). Twenty-six frs. of blown glass, all moderately transparent, in colour ranging from pale green to pale yellow. (*a*) has spiral thread inlay in dark blue. Gr. M. $1\frac{1}{4}''$.

U.M. 007. Stem of wine-glass-shaped vessel of amber-green glass with fr. of base; below, rough glass cut from blow-pipe. Length $1\frac{5}{16}''$, diam. $\frac{3}{8}''$ to $\frac{3}{16}''$.

U.M. 008. Glass fr. Part of spreading rim (?) to drinking glass. Pale brown. Two thicknesses superimposed in manufacture. Diam. when complete *c.* $2\frac{1}{2}''$. $1\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{3}{16}''$.

U.M. 009. Fr. of blown glass; amethyst coloured, green iridescence. Gr. M. $\frac{15}{16}''$.

U.M 0010. Glass fr., translucent green. Gr. M. $\frac{3}{4}''$.

U.M. 0011. Glass fr., part of octagonal ring, translucent deep blue. Thickness $\frac{1}{6}'' \times \frac{1}{8}''$, diam. when complete $\frac{3}{4}''$.

U.M. 0012. Glass fr., part of cylindrical rod of opaque brown glass. Broken each end. Length $\frac{3}{8}''$, diam. $\frac{3}{16}''$.

U.M. 0013. Thirteen nondescript frs. of bronze. Gr. M. $\frac{3}{4}''$.

U.M. 0014. String of beads: one, cylindrical, of pale blue paste; one, irregular, fr. of amethyst; one, double ball, of grey paste; two, barrel-shaped, of black paste streaked with white; one, dome-shaped, of grey stone; one, drop-shaped pendant of black stone with corners rubbed smooth, pierced at one end, triangular in section; one, pear-shaped pendant of white stone, flat on one side and pierced at one end. Gr. M. $\frac{15}{16}''$.

U.M. 0015. (S. of). String of beads: one, cylindrical, of sea-green stone; two, flattened spheroids of blue opaque glass; one, double ball, of black paste with white circles; one, flattened spheroid, amethyst. Gr. M. $\frac{1}{4}''$.

U.M. 0016. Spherical lead bell-clapper, pierced across top for suspension. Diam. $\frac{1}{2}''$.

U.M. 0017. Bronze ring, plain. Diam. $\frac{5}{8}''$.

U.M. 0018. a–b. Two bronze discs, corroded, pierced by small hole near edge. Diam. $\frac{7}{8}''$, thickness $\frac{1}{16}''$.

U.M. 0019. Bronze frs.; four of wire, one of round-headed nail. Diam. *c.* $\frac{1}{16}''$.

U.M. 0021. Five frs. of iron nails (?), much corroded. Diam. $\frac{3}{16}''$ to $\frac{1}{16}''$. Gr. length $1\frac{3}{8}''$.

U.M. 0022. (S. of). Part of bracelet of black stone. Square in section, but outer upper corner bevelled. Thickness $\frac{1}{4}'' \times \frac{1}{4}''$, diam. (when complete) $2\frac{3}{4}''$.

U.M. 0023. (S. of). Pottery fr. from vase of pink clay, glazed inside a mottled bright green. Gr. M. $\frac{5}{8}''$, thickness $\frac{3}{16}''$.

U.M. 0024. (S. of). Bronze strip that narrows to one end, where it is rolled into a ring. $1\frac{3}{4}'' \times \frac{1}{4}''$ to $\frac{1}{8}'' \times \frac{1}{16}''$.

U.M. 0025. (S. of). Half 'nasturtium-seed' bead of pale blue paste. $\frac{1}{4}'' \times \frac{3}{16}''$.

U.M. 0026. Five human skulls.

OBJECTS FOUND ON ERODED GROUND AT MAIRA-TATI NEAR CHIRA

Maira. 001. Pottery fr., outer face divided by incised lines into two zones each containing band of comb-drawn wave pattern. Hard reddish clay, yellow-faced. Hand-made. $2\frac{3}{8}'' \times 2\frac{3}{16}''$.

Maira. 002. Pottery fr., brick-red clay, with stamped orn. of reversed triangles filling angles of chevron line (fragmentary). Central boss on base line of each triangle. $2\frac{11}{16}'' \times 2\frac{1}{8}''$. Pl. IV.

Maira. 003. Stucco relief fr. Gandharvī flying R. Head, breast, L. arm and R. hand missing. Feet complete, with bangles on ankles. For type see Kha. i. E. 0028. White stucco, no colour, surface much worn. $4'' \times 2\frac{3}{4}''$.

Maira. 004. Stucco relief fr. Torso of Buddha, with R. hand in *abhaya-mudrā*. Remains of dark red paint on robe. White stucco. $1\frac{3}{4}'' \times 1\frac{1}{2}''$.

Maira. 005. Stucco relief fr. Three spiral curls of hair, of type Kha. i. 005. Traces of blue paint. White stucco. $1\frac{3}{8}'' \times 1\frac{1}{4}''$.

OBJECTS BROUGHT FROM SITE SOUTH OF SAMPULA

Samp. 001. a–b. Stucco relief frs. of hair. Flat spiral curls (as Kha. ii. 0022) applied to outer shell of stucco, within which (extant in *a*) was second shell. Trace of blue on *a*. White stucco. 5 curls and 2 curl-spaces in *a*; 2 curls and 5 curl-spaces in *b*. Cf. also *Kha. ii. 006. Gr. M. $3'' \times 1\frac{7}{8}''$.

Samp. 002. Stucco relief fr. Double band of beads, ending in a bow and fold of drapery. From a Gandharvī (?). White stucco. $2\frac{1}{2}'' \times \frac{1}{2}''$.

Samp. 003. Stucco relief fr. Four large beads in straight line, on flat ground. White stucco. $3'' \times 2'' \times \frac{7}{8}''$ to $\frac{3}{8}''$.

Samp. 004. Stucco relief fr. Torso and R. arm of seated Buddha. Hands in meditative pose in lap. (Fr. of L. hand left.) $1\frac{3}{4}'' \times 2''$.

Samp. 005. Stucco relief fr. Above is upper half of fig. of Bodhisattva, face front, holding long-stemmed flower over each shoulder. Circular halo and fr. of vesica. Owing to corrosion details indistinct. Below is large circular boss divided into squares and triangles by crossed lines as Chal. 0033, and with waving streamer or flame rising from each side (that on L. almost worn away). There seem to have been none on top. Broken off below; seems to represent the adoration of the Triratna by a Bodhisattva. See K.S. 0017, and Foucher, *L'art du Gandhâra*, i. Figs. 216–18, 220, and 221. White stucco, much sand-worn. Part of backing remains behind. $4\frac{1}{4}'' \times 3'' \times \frac{1}{8}''$ (with backing $\frac{7}{8}''$).

OBJECTS BROUGHT FROM CHALMA-KAZĀN SITE

Chal. 001. a–21. Stucco relief frs. from series of figs. of standing Buddha. Hair stippled; face well modelled; narrow prominent eyes, large mouth, elongated ears. Circular nimbus with lotus-petal border. R. hand raised in attitude of protection; L. hand by side, holding loop of drapery. Feet bare, resting on lotus-petal base. Drapery better and more free than usual. Mantle drawn up from R. and thrown over L. shoulder, pendent ends heavily zigzagged. Looped folds between legs deeply worked; sometimes red, sometimes green or blue. Green on nimbus and pedestal. Fig. when complete stood *c.* $11\frac{1}{2}''$ high. All of whitish-brown stucco which has been accidentally burned and has changed to grey or deep black.

001. a. Torso. Back and crown of head and nimbus missing; broken at waist. Traces of crimson paint on garment. $3\frac{1}{2}'' \times 2\frac{3}{4}''$. *001. b.* Lower part of fig. from middle of thighs to ankles. $3\frac{1}{2}'' \times 3\frac{3}{8}''$. *002.* Head with nimbus; hair indicated by stippling of holes. Chin to crown $1\frac{3}{8}''$; *003.* Feet on pedestal. H. of pedestal $\frac{7}{8}''$. *004.* Lower part of fig. from hips to ankles; remains of paint now terra-cotta pink. H. $2\frac{3}{4}''$. *005.* Trunk from below breast to above knees. Traces of pale copper-green paint H. $2\frac{3}{4}''$. *006.* Fig. from navel to above ankles; also L. hand. $3\frac{1}{2}''$. *007.* Shoulder to waist with R. hand. Across shoulders $3''$. *008.* Shoulders with R. breast and R. hand. Across shoulders $3''$. *009.* R. shoulder and hand, grey-blue paint on dress; hand and neck left white. H. $2\frac{1}{8}''$. *0010.* R. hand and arm. Length $2\frac{5}{8}''$. *0011.* Feet on lotus pedestal. Gr. M. $2''$. *0012.* Head with part of nimbus to R. showing traces of pale copper-green paint. Crown of head with roll of hair and R. ear gone; well-preserved features. Chin to crown $1\frac{5}{8}''$. *0013.* Head; rather corroded. Part of nimbus above to R. Chin to crown $1\frac{3}{8}''$. *0014.* Head complete; nimbus lost. Chin to crown $1\frac{3}{8}''$. *0015.* Head complete; nimbus lost. Chin to crown $1\frac{3}{8}''$. *0016.* Head. Nose, mouth, chin, and lower part of L. ear defaced. Chin to crown $1\frac{1}{2}''$. *0017.* Head;

encrusted but well preserved. Chin to crown $1\frac{5}{8}''$. *0018.* Head with part of neck; well preserved. H. $2\frac{3}{4}''$. *0019.* Head; cracked. Chin to crown $1\frac{5}{8}''$. *0020.* Head; part of R. ear missing. Chin to crown $1\frac{3}{8}''$. *0021.* Head; R. ear damaged. Chin to crown $1\frac{5}{8}''$.

Chal. 0022. Stucco relief fr. Head of Buddha like series Chal. 001. a–21, but slightly smaller. Much corroded. Chin to crown $1\frac{1}{4}''$.

Chal. 0023. Stucco relief fr. Head of Buddha with nimbus, of same type as series Chal. 001. a, but smaller. Features much corroded. Chin to crown $1\frac{1}{8}''$.

Chal. 0024. Stucco relief fr. Head like Chal. 0023; much corroded. Chin to crown 1″.

Chal. 0025. Stucco relief fr. Head and R. shoulder of standing(?) Buddha. Stucco hard, and light biscuit colour. Features defaced. Plain elliptical halo. L. ear gone. Chin to crown $1\frac{1}{8}''$.

Chal. 0026. Stucco relief fr. Head of Buddha. Features defaced. Nimbus plain, with rim border, beyond which flame-work making triangular points above and at sides; cf. Kha. i. s. w. 0011. White stucco, burned. Chin to crown $1\frac{3}{8}''$.

Chal. 0027. Stucco relief plaque of seated Buddha in meditation. Both vesica and nimbus plain, with raised beaded borders. From behind shoulder rise pointed flames. Lotus pedestal, top of R. side of vesica missing. Light red clay. Diam. $3\frac{1}{4}''$.

Chal. 0028. Stucco relief fr. Head of Buddha with nimbus; much corroded. Nimbus shows traces of red, and face has remains of gilding. White stucco, fused. Chin to crown $\frac{13}{16}''$.

Chal. 0029. Stucco relief fr. of wreath made up of bands of overlapping lotus-flowers showing beaded centres. Prob. from vesica; cf. Kha. i. 0013. Burned black. $3'' \times 1\frac{3}{4}''$.

Chal. 0030. Stucco relief fr. of wreath from vesica. Pointed lotus leaves, and a cross-band of beads. White stucco, fused. $2\frac{1}{8}'' \times 1\frac{1}{2}''$.

Chal. 0031. Stucco relief fr. of orn. Square enclosed by two grooves, with row of beads outside. Back shaped to fit to a round surface. White stucco, fused. 2″ sq.

Chal. 0032. Stucco relief fr., like Chal. 0031, but larger and broken across. White stucco, fused. $2\frac{1}{4}'' \times 1\frac{5}{8}''$.

Chal. 0033. Stucco relief fr., consisting of octagonal boss slashed by two pairs of incised lines that cut one another at right angles. In the five squares and four triangles so left are pointed depressions. Prob. central part of a Triratna emblem decoratively treated; see Samp. 005, and K.S. 0017. Clay burned black. From same mould are Chal. 0034, 0035. $1\frac{5}{8}''$ sq. $\times \frac{7}{8}''$.

Chal. 0034. Stucco relief fr., like Chal. 0033. Traces of light (pink?) paint.

Chal. 0035. Stucco relief fr., from same mould as Chal. 0034.

Chal. 0036. Stucco relief fr. Border of vesica (?). Floriate design perhaps based on thunderbolt (?), with raised beads on either side. On either side of central binding, fronds with inturned scroll ends. White stucco, fused. $1\frac{7}{8}'' \times 1\frac{3}{8}''$.

Chal. 0037. Fr. of carved stone fig. of flying *putto.* R. arm raised horizontally and bent at elbow; L. arm raised. Knees bent so that R. heel touches buttock; L. foot free. Head missing. Whole front of body defaced; behind, drapery or wings split away from shoulders; feet broken away at ankles. Prob. flying, and holding across body wreath, from which beaded fillets hang down and twist round legs. Bangles on ankles. Good work. H. $2'' \times 2\frac{3}{8}''$.

Chal. 0038. Terra-cotta appliqué fr., 'Buddhist rail'. From plain beam rise grooved posts with single ball head and base. Between these, squares having raised borders within which chamfered panel on same plane. Rail $1\frac{1}{4}''$ high, with ball post-heads $1\frac{3}{8}''$. Cf. Yo. 0065. Light red clay. From same mould, Chal. 0039–41, 0063–6. Length 3″.

Chal. 0039. Terra-cotta appliqué fr. Buddhist rail as Chal. 0038. Length $2\frac{1}{4}''$.

Chal. 0040. Terra-cotta appliqué fr. Buddhist rail as Chal. 0038. Length $1\frac{1}{2}''$.

Chal. 0041. Terra-cotta appliqué fr. Buddhist rail as Chal. 0038. Length $1\frac{5}{8}''$.

Chal. 0042. Terra-cotta head of Bodhisattva (?). Nose missing. Hair parted in centre and waved back, falls behind ears on to shoulders; also gathered on top of head into a knot, round which passes a fillet. Calm expression. Behind, below ears, hair is rudely expressed by marks made with a curved edge. Head is flat behind, showing impress of border of now missing halo. Chin to crown $1\frac{1}{2}''$. Pl. X.

Chal. 0043. Terra-cotta appliqué fr. Conventional lion's head; cf. Khot. 01. s. Diam. $\frac{7}{8}''$, h. $\frac{13}{16}''$.

Chal. 0045. Stucco relief fr. R. foot, very flat. Surface much damaged; traces of pink colouring. Broken off by ankle. Red clay, burnt. $6\frac{1}{4}'' \times 3\frac{1}{4}''$.

Chal. 0046. Stucco relief fr. L. hand broken at wrist. Open, palm outwards as in attitude of protection. Back not finished. Thumb broken off at first joint. Good work. Light-coloured clay, mud filled. $3\frac{1}{4}'' \times 1\frac{1}{2}''$ to 2″.

Chal. 0047. Stucco relief fr. L. hand clenched; broken at wrist. Good work; back not finished. Light red mud, wooden core (perished). $2'' \times 1\frac{1}{2}''$.

Chal. 0048. Stucco relief fr. L. hand clenched, holding fold of drapery. Good work. Red clay (burned) with mud filling. $2\frac{1}{2}'' \times 1\frac{1}{2}''$.

Chal. 0049. Stucco relief fr. R. hand clenched. Good work. Light red clay (burned) with wooden core (perished). $2\frac{1}{4}'' \times 1\frac{3}{8}''$.

Chal. 0050. Stucco relief fr. from edge of vesica of large fig. Flame orn. of three tongues, pointing horizontally to edge. Light red clay. A short reed formed core of each flame. $3\frac{3}{4}'' \times 3\frac{1}{4}''$.

Chal. 0051. Stucco relief fr. Head of antelope, finished on each side, but not behind. Upright through head is space for core, which doubtless divided into two for the horns, now broken off. Large pointed ears; eyes have slightly protruding circles with small pupil hole; round eye a raised ridge to show lids; no pupil to L. eye. Nostrils (shown by holes) close together. Lower jaw (moulded separately) missing. Light red clay (burnt) with mud and fibre filling. H. $3\frac{3}{4}''$, length $4\frac{1}{2}''$, width $1\frac{1}{2}''$ to $3\frac{3}{4}''$. Pl. CXXXIX.

Chal. 0052. Stucco relief fr. of head of antelope, like Chal. 0051, but not from same mould. R. ear broken away. L. eye has no pupil marked. Lower jaw (moulded separately) missing. No colour. Light-coloured clay (burnt) with mud and fibre filling and reed core. Length $4\frac{1}{2}''$, width $1\frac{1}{2}''$ to $3\frac{1}{4}''$, H. $3\frac{3}{8}''$.

Chal. 0053. Stucco relief fr. Rosette, from head-dress (?). Outside, seven pointed lotus petals. Inside, round a central button, five pointed petals curving in direction of sun's motion. (These are the crescents usually employed for human hair.) Light-coloured clay (burnt). Diam. 3″.

Chal. 0054. Terra-cotta appliqué orn., with pear-shaped outline followed by incised line. Within, double incised heart. Perhaps stalk of flower. Cf. *A. T. 0036. $2\frac{7}{8}'' \times 1\frac{5}{8}''$.

Chal. 0055. Stucco relief fr. of very fine acanthus volute orn. White stucco, fused. $2\frac{9}{16}'' \times 1\frac{1}{2}''$. Pl. X.

Chal. 0056. Stucco relief fr. Floral pattern. In lower central field fleur-de-lis with bound stem; below binding stalk divides, curving up to R. and L. and developing into elaborate fronting anthemia whose points frame the fleur-de-lis. Very fine design. White stucco, fused and much damaged. $3'' \times 2\frac{1}{2}''$. Pl. X.

Chal. 0057. Stucco relief fr. of lotus wreath. Bands of pointed petals with bead rings at intervals. White stucco, fused. $2\frac{5}{8}'' \times 1\frac{1}{8}''$.

Chal. 0058. Stucco relief fr. of oval jewel orn. with bead border. White stucco, fused. $1\frac{3}{8}'' \times 1\frac{7}{8}''$.

Chal. 0059. Stucco relief fr. Three palm leaves (?) branching from common stem; leaves have straight central rib, bordered on either side by small trefoiled lobes. On either side of central frond is conventional lotus bud (that on L. missing). Light-coloured clay; mud and fibre backing. $4'' \times 3\frac{1}{2}''$. Pl. X.

Chal. 0060. Stucco relief fr. Part of Chal. 0061. Stamens with bead ends. $1\frac{1}{2}'' \times 1\frac{5}{8}''$.

Chal. 0061. Stucco relief fr. of lotus design, perhaps part of Padmāsana or from border of vesica. Outer row of large lotus petals (broken) overlapped by small pointed petals; then comes row of beaded ends of stamens; the stamens themselves curve back at right angles, to a lower plane. Red clay (burnt) on mud and fibre core. $3\frac{1}{2}'' \times 4'' \times 2''$.

Chal. 0062. Stucco relief fr. of wreath, consisting of beads bound round in middle with three fillets. Light red clay (burnt). $3'' \times \frac{5}{8}''$.

Chal. 0063. Terra-cotta appliqué fr. Buddhist rail. See Chal. 0038. Length 3″.

Chal. 0064. Terra-cotta appliqué fr. Buddhist rail. See Chal. 0038. Length $4\frac{1}{2}''$.

Chal. 0065. Terra-cotta appliqué fr. Buddhist rail. See Chal. 0038. Length $2\frac{1}{4}''$.

Chal. 0066. Terra-cotta appliqué fr. Buddhist rail. See Chal. 0038. Length $3\frac{1}{2}''$.

Chal. 0067. Terra-cotta relief fr., much sand-worn. Palm leaf and indistinguishable designs. Red clay (burnt). $1\frac{1}{2}'' \times 1\frac{3}{8}''$.

Chal. 0069. Heart-shaped stone ring, prob. from a buckle. Pale grey soap-stone (?). $\frac{3}{4}'' \times \frac{1}{2}''$.

Chal. 0070. Circular stone ring. Light brown. Diam. $\frac{1}{2}''$.

Section IV.—TEMPLE REMAINS NORTH OF KHOTAN

Stay at Khotan.

After a brief stay at Khotan, which manifold tasks, including arrangements well in advance for my return to India, rendered busy, I started on April 5 northward. There was a great extent of ground to be covered on this journey, which was to take me to Ak-su and to the foot of the T'ien-shan, and I knew how soon the rapidly increasing heat would stop any operations at desert sites to be visited *en route*. Certain remains, which my 'treasure-seeking' guides had succeeded in tracing near the northernmost outskirts of the Khotan oasis, furnished the immediate goal, and in order to assure their examination without loss of time I had taken care to have their position fixed beforehand by R. B. Lāl Singh.

Temple site near Kara-sai.

The first site visited lay in the narrow dune-covered belt of desert which separates the outlying tracts of Yawa and Kara-sai in the extreme north-west of the inhabited portion of the Khotan district. I had not seen this area before, and the observations made here, too, of rapidly extending new cultivation were of interest. Thus the long-stretched oasis of Yawa was found to be a creation of the last fifteen years only. But the site between it and the southern edge of Kara-sai proved disappointing (Map No. 20. c. 3). On perfectly sterile soil, between dead tamarisk-cones completely bared of their fuel, I was shown the spot from which some well-modelled relievo figures in hard white stucco like K.S. 001 (Plate X) had been brought to me. No structural remains of any kind survived; but small relievo fragments of similar material could still be picked up in plenty from the eroded loess soil. There could be no doubt that they were remains of the stucco relievo decoration of two Buddhist shrines separated from each other by about 160 yards. All structural remains had been entirely destroyed by wind-erosion; but characteristically enough the reclamation by canals of the areas within 2 miles or so on either side had brought back subsoil water to this ground to within 5 feet or so of the surface.

Relievo fragments in plaster of Paris.

Among the relievo fragments recovered there are a number which are of interest on account of their fine modelling and the good preservation of their surface. Of these may be mentioned the figures of small standing Buddhas in *abhaya-mudrā* pose, such as K.S. 001, 007 (Plate X), represented in several casts; the excellently designed head and torso of a haloed male figure, perhaps a Gandharva, K.S. 005 (Plate X); the representation of what seems worship of the Buddhist 'Triratna', K.S. 0017 (Plate X); and the gracefully executed plaque of a human figure with limbs transformed into foliage, K.S. 0018 + 0029 (Plate X). The relievos show close resemblance in style to corresponding appliqué stuccoes from Dandān-oilik and Khādalik, and like these may have originally belonged to the decoration of large vesicas, etc., but their workmanship is distinctly superior. What, however, is specially remarkable in them is their material, a plaster of Paris of extreme hardness. The peculiar features of this plaster have been noted and discussed in Sir Arthur Church's analysis of a specimen submitted to him.[1] The explanation he gives of the exceptional hardness of the Kara-sai plaster is 'that it has been gently burnt after having been fashioned into form'. He assumes that this burning was intentional, not accidental, and this assumption seems to be supported by the fact that none of the pieces show discoloration by fire as so many of the burnt plaster of Paris relievos from Kighillik,[2] while only in a few (see K.S. 0028, Plate X) does the surface appear cracked as it always does in the latter. The majority of the pieces present a surface of remarkable smoothness, which recalls that of ivory or porcelain and which has so far not been satisfactorily accounted for. A few retain traces of the original colouring.[3]

Visit to new canton of Bōgar-ming.

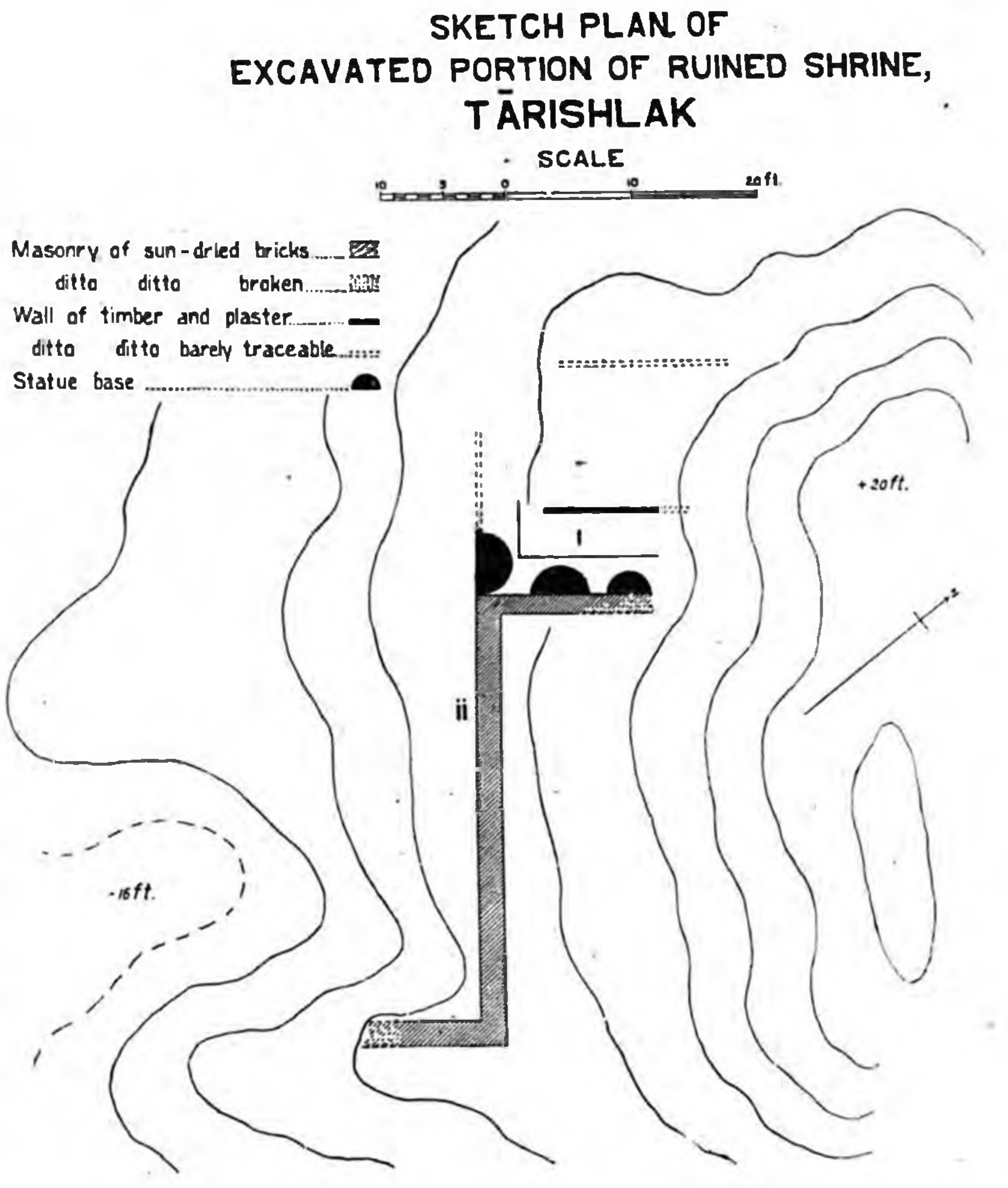
From Kara-sai I took my way eastwards across the Kara-kāsh River in order to explore temple remains which 'Abbās, one of my 'Taklamakānchis', declared that he had discovered in the belt of high sands separating the twin rivers of Khotan between the central portion of the oasis and their junction at Koshlash. The route followed enabled me to see parts of the recent canton of Bōgar-ming (Map No. 20. D. 3)[4] which my old friend and patron P'an Ta-jên, when in charge of the Khotan District about 1900–1, had created by bringing a new canal from the river along the ancient Bahrām-su-üstang. It stretches for fully 10 miles along the left bank of the Kara-kāsh River, and was said to afford ample land for the two thousand families there settled. As my intention was to travel to Ak-su and visit P'an Ta-jên, whose help as Tao-t'ai had now proved as

[1] See Appendix *D*.
[2] Cf. *Ancient Khotan*, i. p. 477; ii. Pl. LXXX.
[3] Cf. K.S. 009, 0013–15, 0026.
[4] This is the correct form of the name instead of 'Mogo-ming', wrongly shown in the map from the surveyor's record.

effective from afar as it had been on my first journey, it was a special satisfaction to obtain ocular proof of the success of his colony, a lasting result of his beneficent administration.

Desert site near *Mayaklik.*

After passing the grazing grounds on the river's right bank below Sarīgh-yez, where the 'Yangi-daryā' branch at present rejoins the main bed,[5] we struck across the high dunes to the east and after some 5 miles were conducted by 'Abbās to the spot where two years earlier he had noticed traces of a plastered and painted wall emerging from the bare sand. At first sight the 'site' looked most unpromising, and in the absence of all surface remains it was surprising that our guide should have been able to locate it again (Fig. 322). A few fragments of coloured mud plaster were found lying loose on the slope of a large sand hillock rising fully 20 feet above the original ground-level. To the west and north of it patches of ground left bare between greyish sand ridges were covered with fragments of very hard bright red pottery which looked ancient. The spot proved to be situated about 2 miles from the left bank of the Yurung-kāsh River where it is lined by a scrubby grazing ground known as Mayaklik (Map No. 20. D. 3).[6]



Search for sand-buried ruin.

The dozen men with me were not enough to cope effectively with the heavy masses of sand, and the trial trench cut by them on the day of arrival at the spot indicated by 'Abbās failed to reveal any sign of the reported wall. But it sufficed to show the moisture contained in the sand lower down and thus to prepare me for conditions of soil which soon proved to be distinctly similar to those I had first encountered seven years before at the great Rawak Stūpa, some 11 miles to the south-east. A large contingent of labourers secured overnight from Yangi-arik, the nearest inhabited place 10 miles away to the south, made it possible to continue the search on the morning of April 9 with increased vigour, and after four hours' digging the top of the reported wall was found on a level about 12 feet below the crest of the sand ridge.

Excavation was carried on under great difficulties owing to the heavy masses of sand which continued to pour down (Fig. 321), but by the evening the floor was reached nearly 9 feet below

[5] Regarding the antiquity of this 'New River', cf. *Ancient Khotan*, i. pp. 171, 179, 200. The point of junction of the Yangi-daryā bed with the Kara-kāsh River was seen by me on my way along the right bank between Sarīgh-yez and Eghri-kōl and ought to have been added in the map to R. B. Lāl Singh's survey.

[6] I did not at first hear of this local name, but knew of the Tārishlak Langar, some 5 miles lower down by the river bank; hence the site-mark *Ta.* given to the objects found at the ruin.

the top of the extant wall (ii in Plan). The wall, built of sun-dried bricks and facing to the south-west, proved on complete clearing to be painted in tempera along its whole length, 34 feet, with colossal figures of alternating Buddhas and Bodhisattvas (?). When the wall was intact, they must have stood to a height of about 12 feet. The figures were surrounded by oval vesicas, and the spandrels left between these below were filled, as Fig. 327 shows, by small Buddha figures, 3 feet 3 inches high. The height of the sand still remaining in front of the frescoed wall made photographing of the colossal figures impossible. While the trench was being widened next day in order to overcome this difficulty, the whole wall collapsed. The brickwork of its lower portion was saturated with moisture, and whatever timber it may have once contained had completely decayed. The wall thus gave way under the pressure of the sand at its back which could not be kept off, and under its weight the painted plaster surface, already soft before, was completely crushed. In consequence of this mishap I must be content with giving a description of the wall-paintings as recorded while excavation was in progress. Wall with colossal fresco figures.

The colossal figures, of which six were actually brought to light, occupied each with their vesicas at their widest a wall-space of 4 feet 10 inches. All of them appear to have been represented in three-quarters profile to the right proper. The right hand appears to have always been posed in the *abhaya-mudrā*, while the left was shown hanging down below the waist carrying a bluish loop or wreath between the thumb and the second and third fingers, much in the same fashion as seen in the fresco which Fig. 325 reproduces. The upper portion of the breast and the head were missing in all figures. The dress, as far as preserved or distinguishable, consisted in each case of an ample outer robe laid over the left shoulder. This was in alternating figures coloured plain reddish brown or else showed on terra-cotta ground close-set bars of dark purple, about 8 inches long and 3 inches wide, with a white stripe running down in the middle.[7] The background of each colossal figure was dark blue, *semé* with white leaves resembling those of the lilac. In the case of the figures wearing the variegated robes last described, the vesica was formed by a broad central band of triangles pointed upwards with two narrower bands on each side, purple and terra-cotta on the inside and terra-cotta and black on the outside. The triangular strips of the central band showed the following succession of colours: black, terra-cotta, dark blue, terra-cotta, white, terra-cotta. The vesica of the figures wearing the plain-coloured robe showed a similar but slightly narrower border within. Outside this a border was formed by two bands, blue and white respectively, interlacing and forming lozenges as it were in relief. The ground was terra-cotta inside the lozenges and purple outside. The small Buddha figures already referred to as filling the spandrels below (Fig. 327) were all holding the right hand in the *abhaya-mudrā* and wearing plain dark-red robes. They faced three-quarters to the left proper and had an elliptical halo besides a vesica. Colossal figures described.

The wall bearing the frescoes just described is likely to have belonged to a hall or court giving access to the shrine of which Ta. i, to be described presently, formed part, and possibly to one or more shrines besides, now completely perished. A wall adjoining at right angles and running south-west was found badly broken and could not be traced beyond 10 feet or so. Destruction by moisture and wind-erosion in turn had left no other structural traces of the hall or court. In what manner it was roofed it is impossible to determine. But considering the great length of the frescoed wall and the fact that its line was continued by what is likely to have been the front of the temple of which Ta. i was a part, it seems probable that the roofing extended only along the frescoed walls, thus forming a kind of open verandah-like galleries or cloisters. Such a roofing must certainly have been provided for the enclosing quadrangle of the great Rawak Vihāra, and the frescoes here obviously Open court adjoining temple.

[7] Fig. 327 shows on the right a small portion of a robe of this type. There the two kinds of vesica decoration can also be made out.

needed protection from rain quite as much as the stucco sculptures along the walls of the latter.[8] The comparative thinness of the walls, only a little over 2 feet, shows that they could not have been meant to bear any great weight.

Passage of temple cella excavated.

Adjoining the north-west end of the frescoed wall excavation, continued under great difficulties (Fig. 321), brought to light the remains of what must have been part of a passage enclosing a temple cella (Ta. i in Plan). Its walls, apart from an outer one which continued that of ii at right angles towards the north-east, were built with timber and wattle. They were only about 6 inches in thickness and had, like all other remains at this ruin, become quite rotten and soft through saturation with subsoil moisture. Those to the south-east and north-west of what seems to have been the cella broke down as soon as they were being cleared. That the paintings on the plaster surfaces of the passage walls should have under such conditions retained their colours in relative freshness was remarkable. The same may be said with regard to what survived of the stucco images set upon a low platform along the outer walls of the passage i.

Fragments of colossal statue.

Of the colossal seated Buddha statue once occupying the south corner there remained little more *in situ* than a broken lotus base over 5 feet across, with portions of the folded legs. But the colossal Buddha head, partially broken (Fig. 323), which turned up on the floor of this corner of the passage, may probably have belonged to it. It measured about 16 inches from the chin to the top of the forehead in its present condition. The heavy piece of stucco was too soft and friable for transport, but still retained its colouring on most parts of the surface. The dark blotches which the photograph shows may mark places once covered by patches of leaf-gold. Tiny flakes of this were still found to adhere here and there. The same explanation may perhaps apply to the numerous dark spots displayed by the surviving fresco pieces, as seen in Figs. 325, 328.[9]

Painted and inscribed image base.

On the other side of the corner was found the stucco base with the legs of a second seated Buddha over life-size, as seen in Fig. 324. The extant portion of his dress was of Pompeian red colour with a blue edge. The whole front of the base, about a foot high, was painted, and this I succeeded in removing, though with great difficulty owing to the extreme softness of the moist stucco and the subsequent brittleness of the surface after drying (Ta. 009, Plate CXXVI). The upper portion of the base represents the edge of a cushion, decorated with semicircular cartouches imitating the pattern of a woven fabric and with tassels at the drooping ends. The round discs in the circular border enclosing half-rosettes suggest imitation of a 'Sassanian' pattern. On the panel below there are painted, on either side of a vase with lotus-flowers, two groups of kneeling worshippers obviously intended to represent the donor and his family. For a detailed description of the figures, three male on the left and three female on the right, I must refer to the List below. The figures are very carefully drawn, and their costume presents a good deal of interesting detail. The chief donor in front wears the dark-red robe of a monk, and his hair is close-cut. The two men behind him carry, besides a sword, pen and tablets hanging from their belt. The chief lady on the opposite side wears a richly embroidered jacket with elaborate sleeves, and below it voluminous trousers. The scarcity of donor figures in the paintings that have come to light from Khotan sites makes it difficult to draw chronological evidence from these features of the costume. An inscription in Central-Asian Brāhmī characters is painted over the right-hand portion of the panel. It has been shown by Mr. Pargiter to contain a Sanskrit Śloka in honour of the painting (and image ?); but the initial portion, which may have contained the artist's name, has suffered too much damage for complete decipherment.[9a]

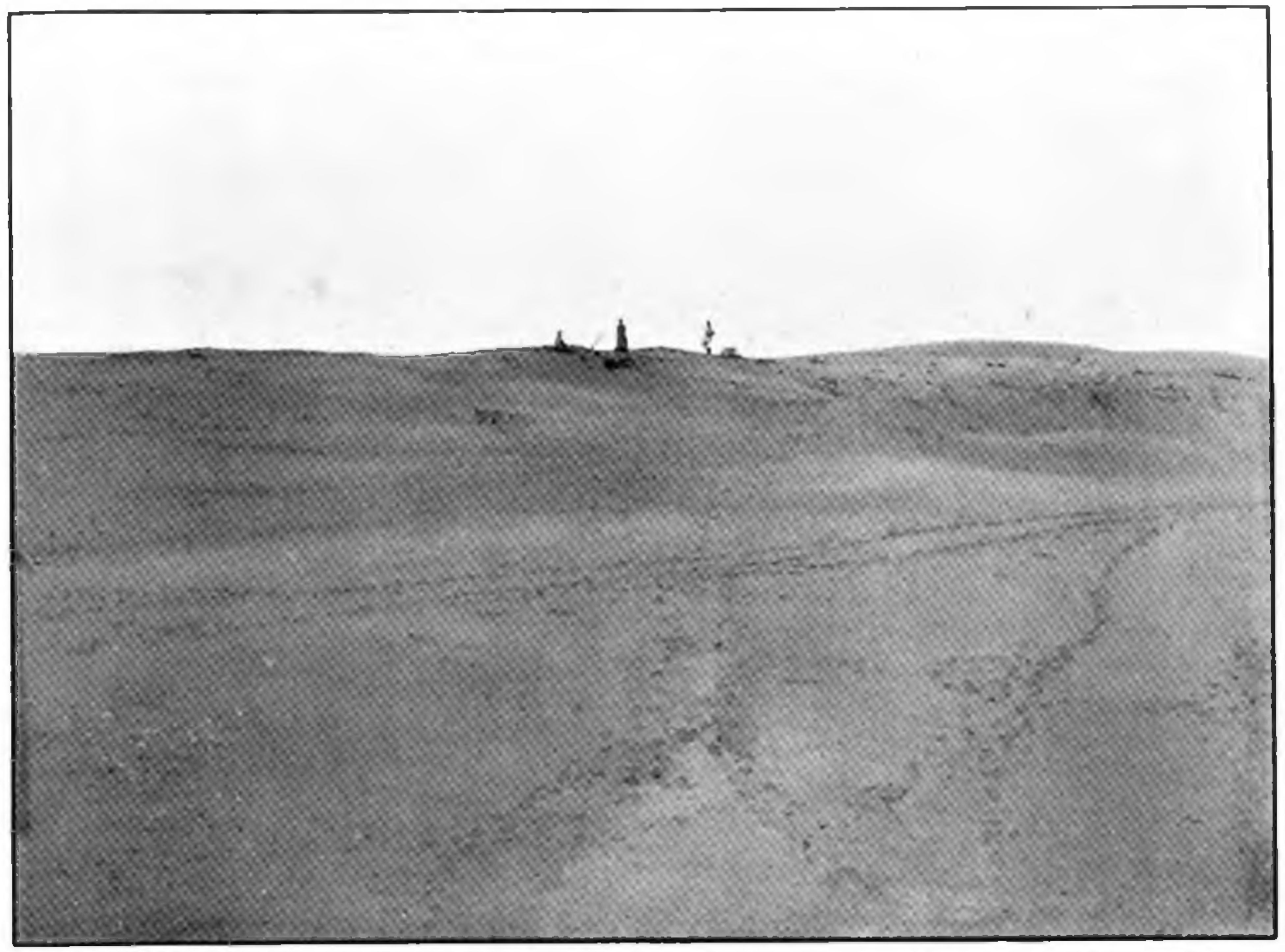
Beyond the image base just described there was found the life-size statue of a richly dressed

[8] Cf. *Ancient Khotan*, i. p. 488.

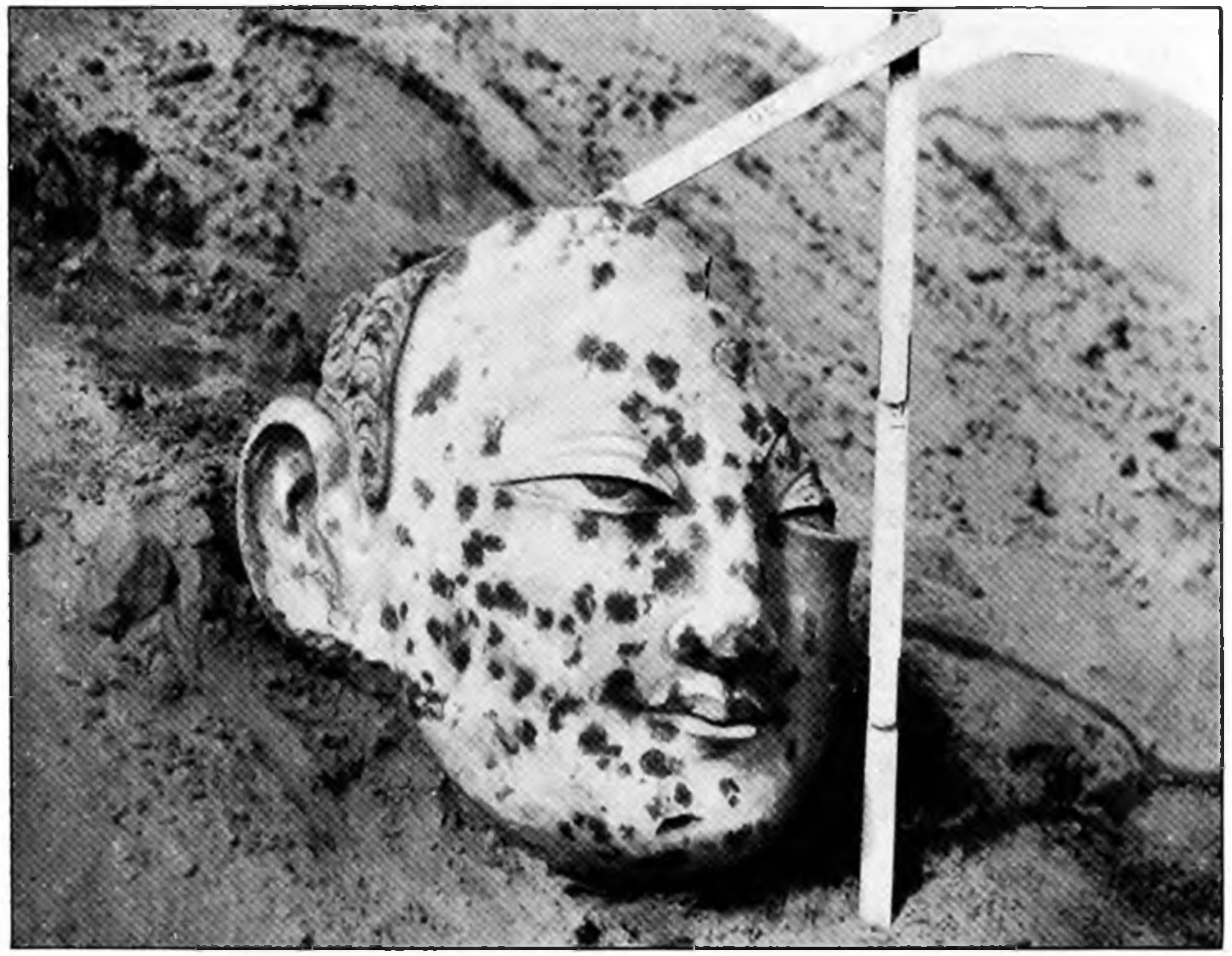
[9] Regarding the custom of applying leaf-gold in patches to stucco images, cf. *Ancient Khotan*, i. p. 496.

[9a] Cf. F. E. Pargiter, *J.R.A.S.*, 1913, pp. 400 sq.

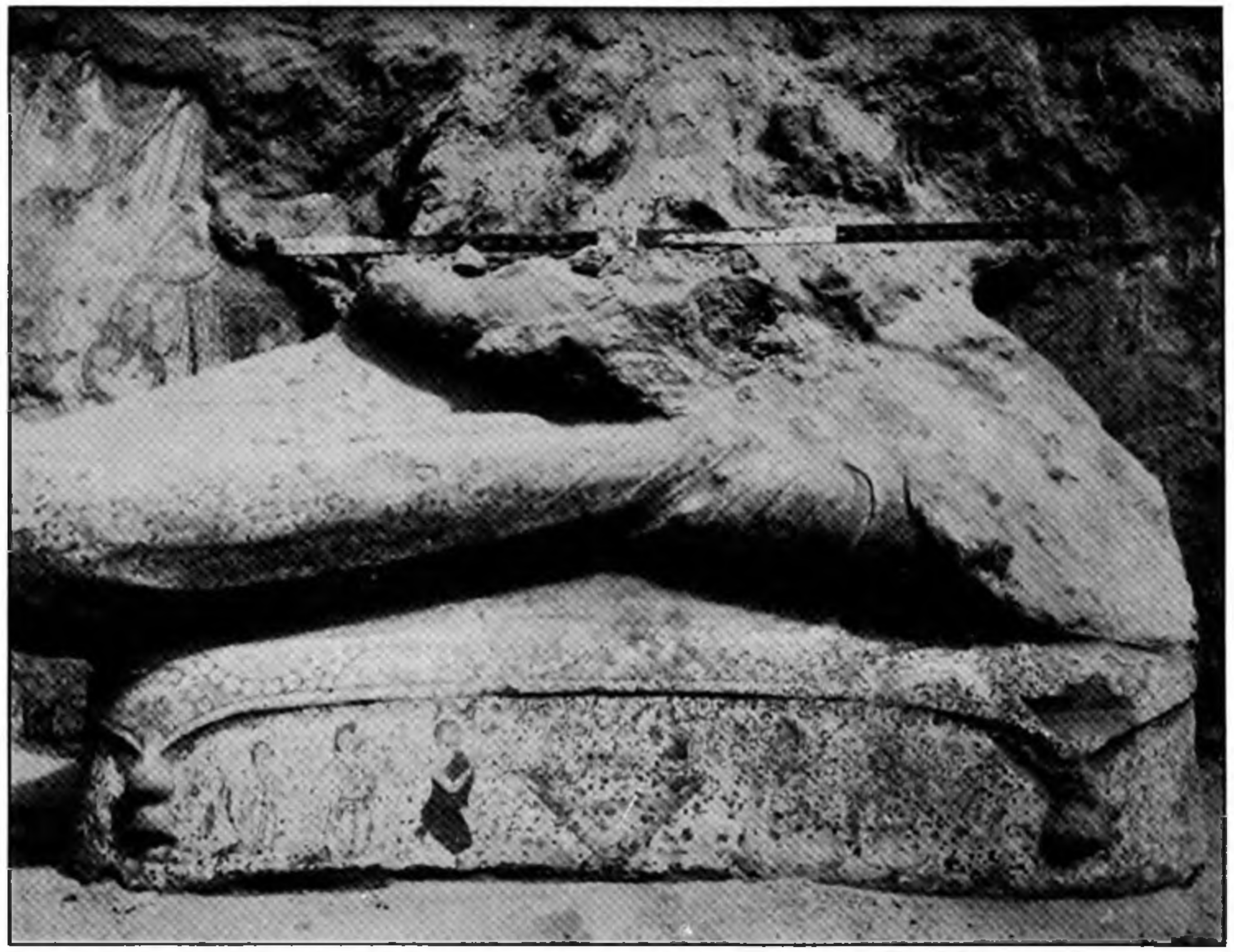
321. EXCAVATION PROCEEDING AT SAND-BURIED SHRINE, Ta. I, NEAR MAYAKLIK, NORTH OF KHOTAN.



322. SITE OF RUINED BUDDHIST SHRINE Ta., NEAR MAYAKLIK, SEEN FROM SOUTH BEFORE EXCAVATION.

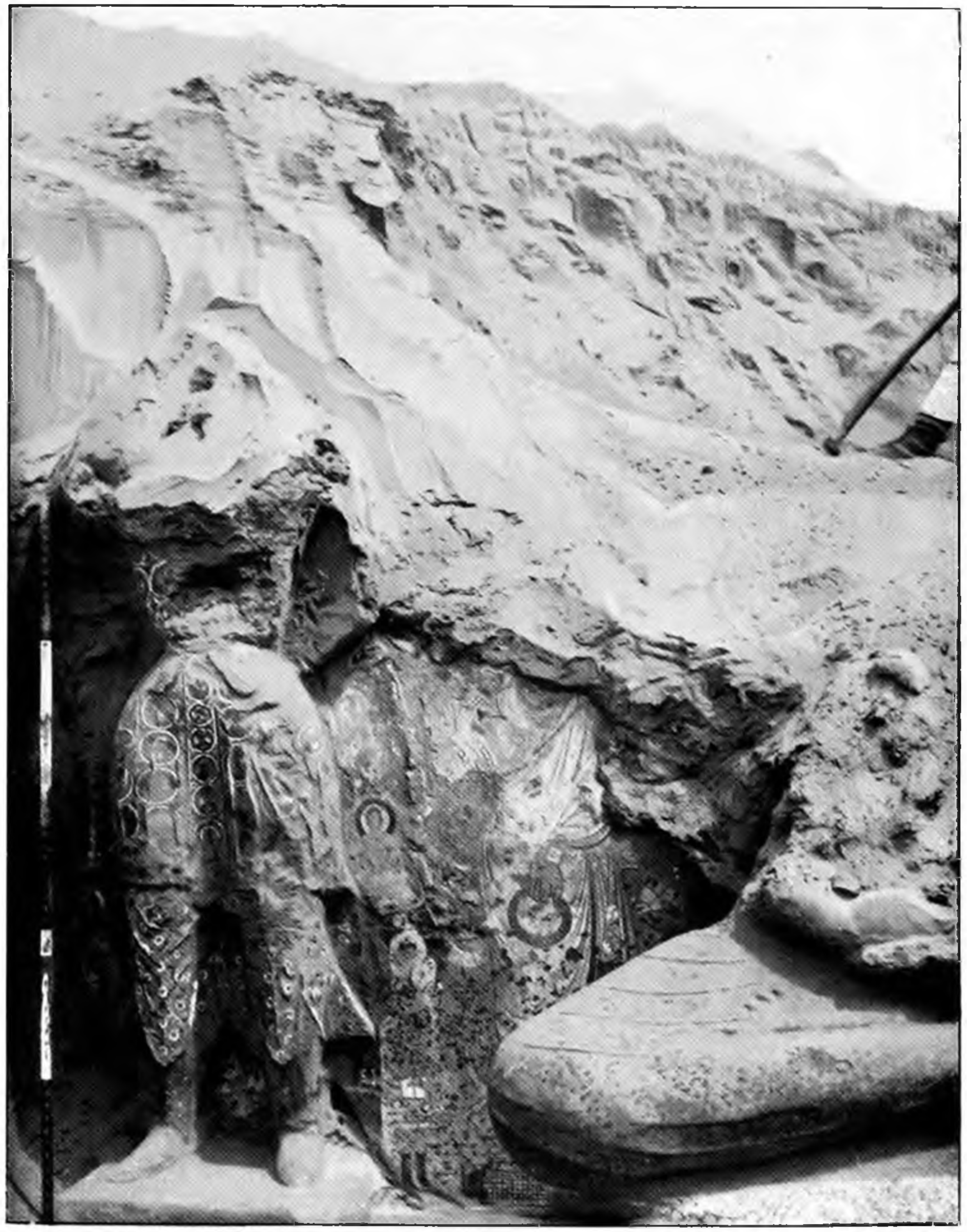


323. STUCCO HEAD OF COLOSSAL BUDDHA STATUE, EXCAVATED IN RUINED SHRINE Ta. i, NEAR MAYAKLIK.



324. REMAINS OF STUCCO BUDDHA IMAGE WITH PAINTED BASE, IN RUINED SHRINE Ta. i, NEAR MAYAKLIK

325. TEMPERA PAINTING ON SOUTH-EAST WALL OF PASSAGE OF RUINED SHRINE Ta. i, NEAR MAYAKLIK.



326. REMAINS OF STUCCO IMAGES AND TEMPERA PAINTINGS ON S.E. PASSAGE WALL OF RUINED SHRINE Ta. i, NEAR MAYAKLIK.

male figure intact to the waist (Fig. 326). It collapsed almost as soon as it had been photographed. It was dressed in a purple coat reaching to above the knees, decorated with large circles marking embroidery or brocade, and an under-garment of brown with blue circlets. The feet were cased in high boots of the 'Chāruk' type and light red colour. At the foot of the wall behind this statue there was found a *Wu-chu* coin embedded in the plaster of the base. The stucco relief fragments, Ta. i. 004–7, found detached, may have perhaps belonged to this figure. **Torso of life-size statue.**

The frescoed wall to the right of this figure still stood to a height of about 4 feet, and showed interesting remains of painting (Fig. 326). The principal figure, preserved to the neck, was that of a richly adorned Bodhisattva, carrying in his left hand a wreath and raising with the right hand a badly drawn object which at the time of the first clearing appeared to me not unlike the Vajra carried by the figure so frequently accompanying Gautama Buddha in the Gandhāra relievos. The plaster surface at this place peeled off before the clearing was finished. The figure, of remarkably good design, was draped in a white robe with the folds painted dark pink and arranged in a manner strikingly graceful and free. Elaborate bands of jewels were shown round the neck and right arm. At the feet, painted rather clumsily over the under-garment, there appeared the figure of a horned deer. **Painted Bodhisattva figure.**

To the right of the Bodhisattva and below there was visible the poorly preserved small figure of a worshipper with a large lotus bud above. To the left above was painted the haloed figure of a white-robed Buddha, seated in meditation and about 7 inches high. A much-effaced object below, looking like a white-haired head, could not be made out clearly. Below this again and reaching down to the floor came the painting, about 16 inches high, of the grotesque warrior figure Ta. i. 009 (Plate XII). Fig. 325 shows its upper part in better condition. The figure, which is fully described in the List, is of interest on account of the curious animal-like features of the face and the details of the armour. Below him a child-like worshipper is seen kneeling, while four lines in Cursive Central-Asian Brāhmī are painted above the latter's head. The significance of the grotesque warrior remains to be determined as well as that of the deer, the head of which he faces. **Smaller painted figures.**

The thin and extremely fragile inner wall of the passage Ta. i retained two remarkable paintings in its lower portion, standing to a height of not more than 4 feet. On the left there appeared within a vesica, and thus clearly marked as a deified being, the four-armed figure seen in Fig. 328. Ta. 008 (Plate XII) is a fragment of it, necessarily in poor preservation. The animal head of the figure, represented in profile, recalled to me at once the rat-headed divinity of the ancient Khotan legend, preserved by Hsüan-tsang, whom a painted tablet found at Dandān-oilik had first shown me.[10] It is true that the head has a rather dog-like muzzle, but the sharp teeth in the jaws and the rat-like pointed ear point clearly to the deified king of the rats whose intercession had saved Khotan from an attack of the Hsiung-nu, or Huns.[11] Over the pink tiara he carries what at the time looked to me like a white human head or skull, a not unsuitable cognizance for the destroyer of the country's formidable foe. The flowing hair of sandy red agrees well with the dark yellow skin shown by the Dandān-oilik figure, and so does the drab or pale buff colour of head, neck, and hands. The right upper hand was broken; the right lower carried an indistinct object, perhaps a fruit or root. The left upper hand grasped a white object which might be a bell, while the lower held a patera. The five black bands, appearing on the forearms and perhaps meant for bracelets, are curious. Both this fresco and the panel adjoining were covered with numerous small black spots, and in view of the suggestion recorded above it is worth noting that tiny flakes of leaf-gold were found adhering to them both. **Rat-headed divinity.**

The panel just referred to, which occupied the wall immediately to the right, was also very curious. It showed the standing four-armed figure of a richly dressed woman with halo and vesica,

[10] See *Ancient Khotan*, i. pp. 264 sq.; ii. Pl. LXIII.

[11] For the legend, a counterpart of that told by Herodotus about the destruction of Sennacherib's Assyrian host, cf. Julien, *Mémoires*, ii. pp. 232 sq.

Painting of four-armed lady.

facing the spectator, with eyes straight and fully open. The dress consisted of a tight-fitting pink jacket or coat reaching up to the neck and well down over the hips. Below it there was seen in front a blue vest between the turned-back lapels of the coat, leaving but little of décolletage below the triple folds of the neck. The flat bust and low waist gave a curious Elizabethan look to the strait-laced figure. The body of the jacket and the tight long sleeves showed elaborate patterns mostly worked in small whitish dots, evidently meant for embroidery and perhaps also strings of pearls. The head displayed well-proportioned youthful features, which but for the elongated lobes of the ears had no hieratic look. Over the hair, dressed smoothly on the forehead and hanging straight down behind, and by the side of the ears there appeared a yellow diadem closely resembling that worn by the lady on the left of the Dandān-oilik panel D. x. 4 to be presently mentioned. The portion of the diadem on the left proper was broken off; for the same reason the object held up by the left upper arm and suggesting a flower could not be determined with certainty. The right upper hand carried a round or foreshortened oval object of whitish-yellow with fine lines in light pink radiating from the centre. The two lower arms were hanging down stiffly to below the hips, where the painting was mostly effaced and the hands could no longer be made out. On the right shoulder the deified lady carried four well-defined narrow and long leaves rising from what looked like a small elliptical basket; between the first and second leaf to the left there appeared a smaller oval object which might have been meant for another curled-up leaf, but might be interpreted otherwise.

Representation of 'silk princess'.

It was in the first place the cognizance held in the upper right hand, suggesting a cocoon by its shape, and the green leaves so strangely adorning the right shoulder which made me at the time recognize in the figure a representation of the Chinese princess to whom the old Khotan legend reproduced by Hsüan-tsang ascribed the introduction of sericulture into the kingdom.[12] The renewed examination of the figure, made possible by the photographs taken before this portion of the wall collapsed, has confirmed my belief in the correctness of this identification. The painted panel D. x. 4, found in one of the Dandān-oilik shrines where it had been deposited as a votive offering,[13] conclusively proves the popularity of the legend, and also that the princess to whom Khotan owed the introduction of its silk industry, so important to the present day, was honoured with worship. Considering the local character of this worship and the non-Indian origin of its recipient, it seems particularly appropriate that the deified lady, to whom Khotanese cultivators must have prayed for protection of their silkworm crops, should be represented by our fresco in secular costume, wholly different from the conventions of the Buddhist Pantheon, and that she should have been given her place by the side of another local divinity, the king of the sacred rats.[14]

Beyond the frescoes now described, the walls of the shrine Ta. i were found completely perished. To search for further structural remains, which the high ridge to the north and east may well hide,

[12] See *Ancient Khotan*, i. pp. 229 sq.; Julien, *Mémoires*, ii. pp. 237 sqq.; Beal, *Si-yu-ki*, ii. pp. 318 sqq.; Rémusat, *Ville de Khotan*, pp. 55 sq.

[13] Cf. *Ancient Khotan*, i. pp. 259 sq.; ii. Pl. LXIII.

[14] It would be possible to think that our fresco panel represented, not the beneficent princess herself, but the 'Goddess of the Silkworms' to whom, according to Julien's translation of a passage in Hsüan-tsang's *Hsi-yü-chi* (*Mémoires*, ii. p. 239), she had dedicated the Lu-shê 鹿射 convent near the Khotan capital. Rémusat's and Beal's translations (*Ville de Khotan*, p. 55; *Si-yu-ki*, ii. p. 319) make no mention of the goddess. [Dr. Giles confirms Julien's rendering: '先蠶 is the usual designation of the Goddess of Sericulture, Lei Tsu.'] In any case, if there had been an officially recognized cult of the 'Goddess of the Silkworms' in Khotan, popular worship was bound soon to mix up the goddess and the princess in one 'Lady of the Silkworms'.

Mr. Watters (*Yuan Chwang*, ii. p. 302) does not give a translation of the passage; but he points out that one version of the text gives the name of the convent as *Mo-shê* 摩射, which agrees better with the form *Madza* found in the Tibetan record of the legend. ['The Kyoto edition of the Tripitaka has the reading 麻射 *Ma-shê*, which agrees better still with the Tibetan.'—L. Giles.]

would have involved the shifting of huge masses of sand and a far greater expenditure of time than any likely results would have justified. The abundant moisture permeating the lower sand strata was bound to have affected any other structures at this site quite as much as those already laid bare. The condition to which this moisture must have reduced any smaller relics of perishable substance was illustrated by the small fragment of a wood-carving, Ta. i. 008, almost wholly rotten, showing a seated Buddha. The other small finds made included decorated terra-cotta pieces, Ta. 004–5; i. 003, very closely resembling those from the Yōtkan débris strata. Among other pottery remains some fragments of a vase with green glaze, Ta. 003; i. 001–2, may be specially mentioned. Other remains from ruin.

In view of the interest attaching to the relics brought to light here of Khotanese pictorial art, and also in view of the position of the site far away from the present limits of the oasis, any indications as to the date of the latter would be specially welcome. The safest evidence at present available is that of the coins. The two found at the ruin itself are the *Wu-chu* piece already mentioned and an uninscribed copper coin from the foot of the wall ii. In addition eight poorly preserved Chinese coins were picked up on a small and completely eroded 'Tati' area to the south of the site. They are either much worn *Wu-chu* pieces or else uninscribed.[15] The collective evidence of the coins thus points to the site having been abandoned before T'ang times. In the present state of our knowledge no closer date limits can be safely deduced either from the style of the paintings or from the palaeographic character of the two inscriptions in cursive Central-Asian Brāhmī found by their side. But if my tentative reading of three characters on a small fragment of coloured wall-plaster which was found in loose sand at the first trial excavation, Ta. 01, as written in Kharoṣṭhī should prove right, we should have to push back the upper date limit for the occupation of the site to about the fifth century A.D.[16] In respect of the position of the site it should be noted that it lies almost exactly in the same latitude as the northernmost of the Kīne-tokmak ruins, about 13 miles away to the east on the other side of the Yurung-kāsh. For these the probability of abandonment before the T'ang period has been shown above,[17] and this lower date limit is certain in the case of the Rawak Vihāra, which lies only 3 miles or less further south.[18] In any case we have thus archaeological proof that the area of the main Khotan oasis on either side of the Yurung-kāsh River must have extended much further north than it does at present. Chronological evidence of site. Abandonment before T'ang period.

On April 11 I moved down by the river and by a long march reached the oasis of Islāmābād (Map No. 27. B. 2), the northernmost outlying settlement of the Khotan district. Even here there was striking evidence of the rapid expansion which Khotan cultivation had been undergoing for some time past; for owing to the construction of a large new canal about 1896 the seven to eight holdings formerly cultivated by settlers from Tawakkēl on the opposite bank of the river had grown into a large colony consisting of about 400 households and capable of supporting many more. A day's halt at Islāmābād was needed for drying and packing the fresco pieces brought away from Mayaklik, and also enabled me to secure welcome information about the ruins at the desert hill of Mazār-tāgh for which I was bound. What I had heard about them in 1900–1 and also on my subsequent visits to Khotan had sounded extremely vague.[19] Oasis of Islāmābād.

But now ten narrow slips of wood, inscribed in Tibetan like those found in the Mīrān fort, were brought to me by Tawakkēl men who the year before had prospected for 'treasure' at a ruin on the hill-top. Thirteen more were put into my hands by Kāsim Ākhūn of Islāmābād, the son of my old guide Aḥmad Merghen,[20] who had died a few months earlier. The old hunter had secured them from Finds obtained at Islāmābād.

[15] See Appendix *B*.

[16] The frescoed fragment showed unusual hardness at the time of discovery. Its original provenance could not be traced.

[17] See above, p. 131.

[18] Cf. *Ancient Khotan*, i. p. 451.

[19] My doubts about the provenance of the coin batch said to have come from Mazār-tāgh and detailed in *Ancient Khotan*, i. p. 579, were fully justified.

[20] Cf. *Ancient Khotan*, i. pp. 237 sq.

a shepherd grazing along the Yurung-kāsh and left them as a sort of legacy for me, whose passage this way he had been expecting. Here I may conveniently mention that three months later, after my return to Khotan, Kāsim Ākhūn brought me a stick (see p. 1283), about $3\frac{1}{2}$ feet long, bearing lengthways about six lines of writing, running from right to left and at first sight resembling Pahlavī. It had been found some time before along with two others, apparently uninscribed, on the top of a tamarisk-cone in the jungle belt west of Islāmābād; it was placed vertically with one end sticking out of the sand. The people had promptly acclaimed the hillock as a 'new Mazār' of some unknown Muhammadan saint, and reburied the stick there. But Kāsim Ākhūn, remembering my desire of 'old things', had made bold to abstract it from this spot of newly started local worship and now offered it as a farewell gift. I have no special reason to doubt the substantial accuracy of his report, but regret that the much-faded writing has not yet been deciphered. The weathering which the surface has undergone where not protected by ink suffices to prove the genuine nature of the relic.

Remains at *Khitai-oilik.*

On April 13 I set out from Islāmābād, and on the day following visited, from my camp at Kirigul-öghil, the remains of which Kāsim Ākhūn and others knew near a grazing ground on the Kara-kāsh River, and which are called Khitai-oilik, 'the Chinese dwellings' (Map No. 27. B. 1). I found there about eight rude structures scattered over an area of bare drift-sand, *circ.* 140 yards across. Their walls, made of Toghrak posts and vertically placed tamarisk branches, stood to a height of 3 or 4 feet where protected by sand or accumulations of dung. The abundance of the latter showed that the place must have been occupied as a shepherd station; but how long ago it was impossible to determine. Pottery débris covered the ground in plenty, but, as the specimens show, it was all of coarse make and unlike in substance that found at datable ancient sites. Thus there was nothing to detain me at this northernmost of Khotan *kōne-shahrs.*

OBJECTS FOUND AT SITE SOUTH-WEST OF KARA-SAI

K.S. 001. Stucco relief. Standing fig. of Buddha in *abhaya-mudrā*. Hair and *uṣṇīṣa* 'stippled'. Features well modelled. Nimbus has inner border of lotus wreath; over shoulders, points of flame-work; conventional drapery. Bare feet rest on lotus pedestal. Fig. complete, only sides of vesica (made separately) wanting. Good work. Very hard white plaster of Paris stucco, the surface apparently treated with a smoother engobage of same material; fused, and almost resembling a porcelain. For an analysis of a similar piece of plaster from Kara-sai site, see App. *D*. Fr. of background, full of fibre, is of same plaster. From same mould, K.S. 002, 003. a–c, 0022, 0023, 0027. $8'' \times 3\frac{3}{4}''$. Pl. X.

K.S. 002. Stucco relief fr. Buddha from same mould as K.S. 001. Feet and pedestal lost. Same porcelain-like stucco. $7'' \times 2\frac{5}{8}''$.

K.S. 003. a–c. Stucco relief frs. Three heads of Buddha from same mould and of same material as K.S. 001. $2\frac{1}{8}'' \times 2\frac{3}{4}''$.

K.S. 004. Stucco relief fr. Head of Buddha with plain nimbus. Smaller scale than K.S. 001. Round edge of vesica runs lotus wreath and outer flame border. Hard white stucco, as K.S. 001. See K.S. 007. $2'' \times 2\frac{3}{4}''$.

K.S. 005. Stucco relief fr. Head and body to waist of nude male fig. with nimbus. Upper arms lowered, and forearms raised at angle with them, but broken off, the R. at wrist, the L. in middle. In front of R. forearm is portion of wreath. Two bands from corners of cloak on back pass over either shoulder and are tied upon chest; cf. K.S. 0011. Very hard white stucco similar to that of K.S. 001. $2\frac{1}{2}'' \times 2\frac{1}{2}''$. Pl. X.

K.S. 006. Stucco relief fr. Head of elephant from front. Trunk curled up, broken; tusks have been separately inserted, but are lost. Good work in low relief. Hard white stucco. $4\frac{5}{8}'' \times 2\frac{5}{8}''$.

K.S. 007. Stucco relief fr. Fig. of Buddha exactly like K.S. 001, and in same material, but smaller. Plain nimbus; vesica round whole fig. has flame border outside lotus wreath. Upper part of vesica gone. From behind shoulders pointed flames rise (cf. Chal. 0027). No colour. From same mould, K.S. 004, 0010, 0024. $5\frac{3}{4}'' \times 3\frac{1}{2}''$. Pl. X.

K.S. 008. Stucco relief fr. of lotus wreath from large vesica. Three bands of petals, a double fillet, and a bead band, repeated. Same material as K.S. 001. No colour. From same mould, K.S. 0020, 0021. $2\frac{1}{2}'' \times 1\frac{1}{8}''$.

K.S. 009. Stucco relief fr. of jewelled band. Oval surrounded by two mouldings and a row of beads. Traces of red. Same material as K.S. 001. $2\frac{1}{4}'' \times 2''$. Pl. X.

K.S. 0010. Stucco relief fr. Lotus pedestal and feet of Buddha. Same mould and material as K.S. 007. $1'' \times 1\frac{1}{4}''$.

K.S. 0011. Stucco relief fr. Head of fig., nimbus and R. shoulder with elbow preserved. Round brows a fillet above which is crown-like head-dress with flat top and petal border. Elongated ears. Nimbus plain. R. arm stretched out from shoulder, and bent upwards. Same material as K.S. 001; for fig., cf. K.S. 005. $1\frac{3}{8}'' \times 1\frac{5}{8}''$.

K.S. 0012. Stucco relief fr. of chain-pattern. Curved; round links. $1\frac{1}{4}'' \times \frac{3}{4}''$. Pl. X.

K.S. 0013. Stucco relief fr. of garland, curved in section, decorated with appliqué six-petalled flowers on convex side. Only five extant; one shows traces of blue paint. Same material as K.S. 001. Cf. K.S. 0026. $3\frac{1}{8}'' \times 1''$. Pl. X.

K.S. 0014. Stucco relief fr. Convex piece once backed with canvas, and orn. with ripples of hair (?), showing traces of blue paint. Same material as K.S. 001. $2\frac{1}{4}'' \times 1\frac{1}{2}''$.

K.S. 0015. Stucco relief fr. of flame-pattern from edge of vesica (?). Three flames (beginning only). First has orange paint, bordered by a red line; next shows traces of mauve and green on white; while third is buff. Once backed with canvas. Material same as K.S. 001. $2\frac{1}{2}'' \times 1\frac{3}{4}''$.

K.S. 0016. Stucco relief fr. Circular flower with pendent seed-vessel, resembling A.T. v. 0039, but surface defaced. Same material as K.S. 001. $1\frac{15}{16}'' \times 1\frac{11}{16}''$.

K.S. 0017. Stucco relief fr., possibly representing the adoration of the Triratna by a Brahman. Lozenge-shaped when complete, but R. half broken off. On R. (centre, when complete), from lotus-flower, rises elongated octagonal boss, faceted, and with deep depressions in the facets; similar except for elongation to the boss Chal. 0033. From top and each side rises flame or streamer (that on R. lost). Cf. Samp. 005 and Foucher, *L'art du Gandhâra*, i. Figs. 216–18, 220, which this recalls; see also Fig. 221. On L. crouches male fig., nude except for loin-cloth, body in profile, face front. Above his head is object not clear, perhaps the Brahman's top-knot of hair or possibly the head of a snake, in which case the fig. would represent a Nāga. Border of beads between plain mouldings. Outside border, at top, fr. of leaf scroll. Good work. Material as K.S. 001. $3'' \times 2\frac{1}{4}''$. Pl. X.

K.S. 0018. Stucco relief fr. Free spiral foliage projects to L.; to R. what resembles human breast with part of bead necklace. Part of fig., the foliage taking place of R. arm; see K.S. 0029. Hard white stucco, as K.S. 001 $1\frac{1}{2}'' \times 2\frac{5}{8}''$. Pl. X.

K.S. 0020. Stucco relief fr. of lotus wreath from same mould as K.S. 008. $2\frac{7}{8}'' \times 1\frac{1}{8}''$. Pl. X.

K.S. 0021. Stucco relief fr. of lotus wreath from same mould as K.S. 008. $3\frac{5}{8}'' \times 1\frac{1}{8}''$.

K.S. 0022. Stucco relief fr. Feet and lotus pedestal of Buddha. Same mould and material as K.S. 001. $1\frac{3}{4}'' \times 1''$.

K.S. 0023. Stucco relief fr. Pedestal, feet, and lower part of drapery of Buddha. Same mould and material as K.S. 001. $2\frac{1}{2}'' \times 2\frac{1}{2}''$.

K.S. 0024. Stucco relief fr. Head of Buddha. Same mould and material as K.S. 007. Part of halo preserved on L. Gr. M. $2\frac{1}{4}''$.

K.S. 0026. Stucco relief fr. of wreath as K.S. 0013. Traces of blue remain. $3\frac{5}{8}'' \times \frac{3}{4}''$.

K.S. 0027. Stucco relief fr. Standing Buddha, from same mould and material as K.S. 001. Complete as far as middle of thighs. L. side of halo gone. $5\frac{1}{2}'' \times 2\frac{3}{8}''$.

K.S. 0028. Stucco relief fr. Lower part of Gandharvī in semi-profile to L., kneeling on L. knee on lotus. Below waist, draped. Part of R. arm preserved bent with hand to breast, but hand missing. Part of vesica with flame border on L. Cf. Kha. i. N. 002. Plaster of Paris stucco. $3\frac{1}{2}'' \times 2\frac{1}{4}''$. Pl. X.

K.S. 0029. Stucco relief fr. Above to L. fine curling foliage; below to L. a human hand (or foot) resting on a twig, and rising out of smooth face of plaster to R. Possibly lower part of body, floriate tail and flipper-like foot of creature resembling *Kiṃnarī*; cf. K.S. 0018. Gr. M. $2\frac{1}{2}''$. Pl. X.

K.S. 0030. Stucco relief fr. Lotus leaves arranged in a canopy. Bordered below in centre by semicircular raised bar. Traces of similar bar on R. end. At top the base of further orn. Plaster of Paris stucco. $2\frac{1}{2}'' \times 1\frac{3}{4}''$.

OBJECTS EXCAVATED OR FOUND NEAR RUINED TEMPLE ABOVE TĀRISHLAK

Ta. 01. Fresco fr. showing traces of Kharoṣṭhī (?) inscription in red on buff ground. $2\frac{3}{4}'' \times 1\frac{1}{4}''$.

Ta. 001. Pottery fr. of vase. Dark grey-brown clay, wheel-made. Outer surface burnished smooth and decorated with incised concentric circles. Part of two sets seen. From 'Tati' south of Mayaklik site. $1\frac{3}{4}'' \times 1\frac{1}{8}'' \times \frac{3}{16}''$.

Ta. 002. Pottery fr. of vase. Pink clay. On outside, ring in relief and next to it a pattern of lines crossed lozenge-wise, incised. Rough surface. Hand-made. Provenance as Ta. 001. $2'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$.

Ta. 003. Pottery fr. of rim of bowl with upper and lower flange, resembling Roman mortarium. Pinkish clay covered with olive-green glaze much decayed; cf. Nura. 003. Diam. at neck *c.* 6". $2'' \times 1\frac{1}{2}'' \times \frac{3}{8}''$.

Ta. 004. Terra-cotta fr. of animal head from vase handle. Cf. Yo. 0015. f, type *a*. Features defaced. Gr. M. $1\frac{5}{8}''$.

Ta. 005. Terra-cotta appliqué fr., rosette orn. Rude and worn. Outer circle of dots, ring, and central dot. Diam. $\frac{7}{8}''$.

Ta. 008. Fresco fr. from fresco shown *in situ* in Fig. 328, showing head and shoulders of rat-headed divinity. Head in profile to L., rather dog-like muzzle, jaws open showing tusks in both jaws; tongue resembling leaf-shaped flame (?) protrudes. Ear human, elongated upwards, suggesting rat's, and downward with distended and pierced lobe. Shoulders square to front; arms (upper pair of two) upraised, with hands grasping objects unrecognizable. That in L. is perhaps a bell. Head, neck, and hands, drab or pale buff, with traces of gilding on neck; nimbus drab. Flowing hair, sandy red. Breast and arms robed in close-fitting garment of light red covered with circular pattern in white spots, and with dull grey band at neck. Bracelets shown as black bands; head-dress lost. Borders of nimbus and vesica very dark pink; field of vesica light blue, inner border light red.

Much broken and covered with black spots. The whole seems to have been on a curved surface. From passage wall of shrine Ta. i. 2′ × 1′ 2″. Pl. XII.

Ta. 009. Frescoed base of colossal seated fig. from Ta. i; front panel in two pieces (joined). For base *in situ*, see Fig. 324. Upper part to depth of 3″ represents edge of cushion in relief on which fig. was seated, finishing off in drooping ends, orn. with tassels. It is decorated along whole length in imitation of woven fabric with series of semicircular cartouches applied alternately to upper and lower margin and containing half-rosettes. Border of cartouches is black with white discs as that of Ch. 009; petals of rosettes (from outside) white, yellow, grey, and yellow.

In sunk panel below appears lotus in vase with three kneeling figs. on each side. Lotus-flower in black outline, with leaf on separate stem upon each side, rises from mouth of wide-winged vase having holes pierced in shoulders, as Yo. 00178. Light red with black outlines, holes black.

Worshippers on L. are male. Chief donor nearest vase has close-cut black hair, and is closely wrapped in dark-red robe passing over L. and under R. shoulder; R. arm bare. Wears black shoes and carries elaborate half-open bud. Next (same scale) has long black hair cut square at neck and small moustache, holds stem with three closed buds, and wears long-sleeved loose coat drawn in by belt and reaching to knees; below, black boots. Collar, cuffs, and border of coat, bluish grey with white spots. On L. side projects sword-hilt; on R. hang pen, tablets, and ink-case (?). Third fig. resembles second, but is smaller and less elaborately drawn, and stem has one bud only.

Worshippers on R. are female, similarly arranged. Chief, donor's wife (?), nearest vase, wears voluminous trousers or skirt drawn in to ankles, and over it tight jacket reaching to hips, with long sleeves ending in wide hanging cuff. Collar, cuffs, and border of jacket are of embroidery represented in black outline. Hair is in small knot at top of head, and tied up at neck with white bows; long lock before ear. Holds elaborate half-open bud in joined hands. Second fig. similar, but smaller; sleeves close to wrist, border of jacket grey, hair in pigtail; holds stem with single bud. Third fig. similar to second, but still smaller; border of jacket pale brown; wears white cap beneath which falls pigtail (or top of head shaven).

All figs. drawn in light red outline; hair black; heads round with long drooping noses, sloping foreheads, and small chins; background buff.

Below cushion runs verse in Central-Asian Brāhmī script and Sanskrit language, evidently composed by some local author in honour of the painting; but beginning, which prob. contained painter's name or dedication, is too much obliterated to be intelligible. Cf. F. E. Pargiter, *J.R.A.S.*, 1913, p. 400.

Technique of painting as in Ta. i. 009; careful drawing; condition very bad, surface brittle and covered with black spots.

H. 1′, length 3′ 5″. Pl. CXXVI.

Ta. i. 001. Pottery fr. Lower part of bowl of coarse ware. Clay red and hard. Dark mottled green glaze on both sides. Foot knocked off. H. (from ft.) $1\frac{1}{2}''$, thickness $\frac{5}{16}''$ to $\frac{7}{16}''$, diam., greatest $3\frac{1}{2}''$, least $2''$.

Ta. i. 002. Pottery fr. Part of splayed rim of vase. Coarse hard red clay. Pale green glaze with darker mottlings on both sides. H. 1″, orig. diam. $4\frac{3}{4}''$, thickness $\frac{3}{8}''$. Gr. M. $3\frac{3}{8}''$.

Ta. i. 003. Terra-cotta fr. Head of antelope with pair of long curved horns (pair shown by deep groove). Bosses on top of head surrounded by raised rings represent eyes. Slit (only on one side and end) for mouth. Large ears (broken); cf. hunted beast, F. II. i. 003. Coarse red clay. Snout to tip of horns $2\frac{5}{8}''$.

Ta. i. 004. Stucco relief fr. Oval boss on background, curved in section. Boss shows six pear-shaped leaves radiating round central button, the whole surrounded by bead moulding. Remains of gilding. Background shows dark red paint and traces of blue, also series of dots in thick white paint. Prob. orn. from arm of large fig. Gr. M. $2\frac{3}{4}''$, diam. of boss $2'' \times 2\frac{1}{4}''$.

Ta. i. 005. Stucco relief fr. of drapery of large fig. Traces of black and red paint, and of gilding. Clay, unburnt. $2\frac{1}{4}'' \times 1\frac{3}{4}'' \times \frac{5}{16}''$.

Ta. i. 006. Stucco relief fr. of hair from crown of head of life-size fig. Concentric rings of crescent-shaped curls. Plentiful remains of blue paint. Clay, unburnt. $4\frac{3}{4}'' \times 2\frac{1}{2}''$.

Ta. i. 007. Stucco relief fr. of lotus crown of life-size fig. Centre and stamens gilt (over green); petals green; surrounding band gilt, rim below green. $4\frac{3}{4}'' \times 2\frac{1}{2}''$.

Ta. i. 008. Wooden disc with relief of seated Buddha in attitude of meditation. Ray border to circular vesica.

Traces of blue paint over white slip on hair, and gilding over rest of fig. L. border and R. side of disc missing. Wood very rotten. Diam. $1\frac{7}{8}''$. Present width $1''$, thickness $\frac{3}{16}''$.

Ta. i. 009. Fresco fr., much broken, outlined in black and dull red on light buff ground, from wall surface seen in Fig. 325. Only colours occasional grey and buff, very pale. On L. is standing fig. of warrior, $\frac{3}{4}$ R.; R. shoulder and side of head missing, legs broken off across calves. Wears full armour: close-fitting cuirass with corslet over breast, and short mailed skirt to knees, represented in horizontal bands of light grey and buff, and belt of circular discs. Below are breeches tucked into high boots. Sleeves long and close-fitting to wrist. L. hand at breast holds tazza with dome-shape contents (or cover), thin stem and flat base; R. on hip seems to hold purse or dagger. On head tiara of some kind surmounting close-fitting head-dress, and circular halo behind. Features are grotesque: wide mouth and jaw, with displayed tusk, chin cleft, upper lip drawn into mouth in wrinkles, or perhaps intended to be cleft. Lower line of upper eyelid sweeps down by nose and out round cheek in wide curve, and upper line of eyelid makes similar smaller curve to corner of mouth, with grotesque effect.

On R. edge, facing him, appears head, neck, and foreleg of deer outlined in dark red. Below, between them, appears upper part of small fig. holding three buds in R. hand; prob. the donor, and kneeling. Childish features; head semi-shaved, with hair in triangular fringe over forehead, and in circular patch over ear with tail falling behind; cf. small kneeling fig. in Mi. xiii. 12. Head reaches below knee of deer, and above are four lines of inscription in Central-Asian Brāhmī.

Drawing bold and good; surface spattered with black spots or stains as Ta. 008, 009. $14'' \times 9''$. Pl. XII.

OBJECT SAID TO HAVE BEEN FOUND NEAR ISLĀMĀBĀD

Islamabad. 001. Stick bearing lengthways about six lines of much-faded writing from right to left. Script and language doubtful. $3'\ 5\frac{3}{4}'' \times 1\frac{3}{8}''$. Extent of writing $2'\ 2''$.

OBJECT SAID TO HAVE BEEN FOUND NEAR YANGI-DARYĀ, ON LOWER KHOTAN RIVER

Yangi-darya. 001. Amulet in case. The case consists of two straight pieces of wood, semicircular in section, and hollowed. At either end a raised flange left on outside; one end cut off straight while other is pointed. The two pieces are fitted face to face and bound with string at ends. Contains carefully folded snake-skin with head (with eyes) on top. $4\frac{3}{4}'' \times 1\frac{1}{4}'' \times 1''$.

Brought by Kāsim Ākhūn, as coming from a 'Mazār' east of Yangi-daryā.

SPECIMENS OF POTTERY FOUND AT KHITAI-OILIK

Khi. 001. Pottery fr. of rim of vessel, hand-made, of ill-levigated red-burning clay, with haematite wash on surface. Fired on an open hearth. $1\frac{3}{4}'' \times 1''$.

Khi. 002. Pottery fr., hand-made, of drab clay burning to dull red, fired on an open hearth; inner face smoothed. Gr. M. $2''$.

Khi. 003-6. Pottery frs., hand-made, of very ill-levigated grey clay, occasionally tending to flare to red; fired on an open hearth; all orn. with roughly incised vandyke. 006 is mottled black and red, perhaps due to blending of two qualities of clay. Gr. M. average $1\frac{1}{4}''$.

Khi. 007. Pottery fr., hand-made, of ill-levigated grey-burning clay very evenly fired on an open hearth. Incised vandyke orn. on concave side. Cf. Khi. 003–6. Gr. M. $1\frac{1}{2}''$.

Khi. 008. Pottery fr. from everted rim of bowl; neck orn. with roughly incised zigzags. Hand-made, of poorly levigated red-burning clay, fired on an open hearth. $1\frac{1}{2}'' \times 1\frac{1}{2}''$.

CHAPTER XXXII

FROM MAZĀR-TĀGH TO MARĀL-BĀSHI

Section I.—THE RUINED FORT ON MAZĀR-TĀGH

March down united Khotan River bed.

Two marches sufficed to carry me from our camp at Miravit to the point where the Mazār-tāgh hill range abuts on the Khotan River. They took me past the confluence of the Yurung-kāsh and Kara-kāsh at the lonely 'Langar' of Koshlash, the 'Junction' (Map No. 26. B. 4), where a watch is supposed to be kept on travellers following the caravan route to or from the Tārīm, and thence down the wide bed of the united rivers. Fully a mile or more across in most places, this bed was practically dry at that season. What running water there was in a narrow winding channel did not reach further than about 5 miles below Koshlash. Beyond this there was only a chain, growing thinner and thinner, of pools with fresh water left behind by the last summer's flood. During July and August, when the glacier streams at the head-waters of the two rivers in the ice-crowned main K'un-lun ranges send down their full quota, the enormous volume of water completely fills the bed, wide as it is. The route then passes through the dune belt of riverine jungle on the left bank, and in places is difficult to follow. But during the rest of the year the route lies along the open smooth expanse of the river-bed, which makes excellent going. There is always sufficient subsoil water percolating in the bed to keep fresh such water as is found at intervals in pools below the banks where the current of the summer flood has set; or else it is obtainable by digging wells.

Desert route by Khotan River.

The route by the river provides the most direct line of communication between the Khotan region and the northern half of the Tārīm Basin, and on account of its shortness it must have claimed considerable importance all through historical times. Yet there can be no doubt about its having borne always the character of a desert route. The physical conditions implied by the constant vagaries of the river, which the numerous dry branch beds and islands below Mazār-tāgh attest, make it very unlikely that permanent settlements of any size could ever have existed along the terminal river-course. At the same time it is clear that the grazing to be found in the riverine belts of jungle, confined as they are for the most part by the close approach of the high barren sands of the desert on either side, must have greatly facilitated traffic and regular intercourse. Thus during Yāqūb Bēg's rule a line of postal stations was maintained here from Khotan to Ak-su. Now, too, shepherds from both districts are in the habit of visiting the more attractive grazing-grounds by the river for a great part of the year. These brief notes on the character of the route and of the ground along which it leads will help to account for the finds that rewarded my exploration of the Mazār-tāgh.

Hill chain of *Mazār-tāgh.*

It came into view first on the morning of April 16 as a long-stretched bare ridge rising above the left bank of the river and half hidden by the dust haze of the desert. On nearing it, the dark pink colour of the sandstone in that portion which immediately overlooks the river (Fig. 335) showed off vividly against the yellow sands enveloping most of the hill range and against the dark green of any tamarisk and Toghrak jungle that is to be found at its foot by the river. I may note here that the Māzar-tāgh, as surveyed on this visit by R. B. Lāl Singh, proved to extend as a narrow but continuous hill chain north-westwards for a distance of at least 24 miles. Though it rises nowhere to

more than about 300 feet above the absolutely barren waste of high dunes on either side, its isolation in the midst of the Taklamakān desert makes it a very striking and geographically interesting feature. Its bearing and the similarity of its geological structure to that of the chain of rugged isolated hills rising near Marāl-bāshi and Tumshuk on both sides of the Yārkand River justify the belief that the Mazār-tāgh of the Khotan-daryā forms the last remnant of an ancient mountain system, which jutted out south-eastwards into the Tārīm Basin from the outermost chain of the T'ien-shan subsequently visited on my way from Ak-su to Marāl-bāshi. That it is the never-ceasing wind-erosion of countless ages which has reduced this remnant to its present insignificant dimensions appears to me more than ever probable since the observations I was able to gather in 1913 on my attempt to reach the Mazār-tāgh from the side of Marāl-bāshi.[1]

Fort crowning end of ridge.

So striking a natural feature as this hill range rising abruptly in the midst of the desert was bound to attract local worship at all times, and this explains its modern designation as the 'Hill of the sacred shrine'.[2] I was, therefore, prepared for the conspicuous collection of poles bedecked with rags and other ex-votos which crowns the end of the ridge where it falls off with precipitous cliffs towards the left river-bank (Fig. 335; see site-plan, Plate 59). But my satisfaction was greater when, ascending to the crest of the ridge about a hundred feet higher, I found it occupied by the ruins of a small and relatively well-preserved fort. Its high walls standing out clearly defined against the sky had, when seen from below at a distance, looked almost like some rock formation; for the total want of covering detritus or sand on the steep slopes has given the appearance of natural walls, terraces, or steps to the denuded sandstone strata which crop out at a sharp tilt.[3]

Position of fort.

The crest of the ridge on which the ruins stand is very narrow where it approaches the river to the east, and even where it culminates in the small plateau bearing the detached watch-tower seen in Fig. 329 its width is only about 30 yards. To the south the ridge presents a very precipitous face, practically unscalable near the fort. The slopes to the north are easier; but these too are completely commanded by the fort and the tower. A second ridge shown in the site plan, which runs parallel to the main one for a considerable distance, is both lower and beyond the range of bow-shot. The position thus occupied by the fort was naturally very strong, altogether inaccessible to attack from the south and east, and protected from the west by the tower already referred to. Apart from this outlying and very massive tower, the fort was defended on the north-west by a wall stretching across the rocky crest and by two bastions 16 feet square, projecting at either end and built solid (Fig. 329). These bastions and the curtain between them were constructed of flat pieces of clay set in mortar, with layers of tamarisk branches between the masonry courses at intervals of 10 inches. In addition, posts and beams of Toghrak wood inserted within served to strengthen the masonry, both here and in the walls, fully 10 feet thick, which enclosed the fort proper on the south-east and north-east. The latter walls, as well as those of the inner structures and the court v, were built with coarse bricks, measuring 15″ × 8″ × 3½″.

Construction of walls and towers.

Interior of fort.

By filling up the space within the walls a level area was created over the naturally steep north slope to serve for the interior of the fort. This comprised the inner court iv, measuring 50 feet square, which was found covered with the débris of less substantial structures likely to have served as quarters. Abundance of charred timber suggested that these may have been constructed mainly

[1] See *Third Journey of Exploration*, *Geogr. Journal*, xlviii. pp. 113 sq. The application of the name *Mazār-tāgh* also to the isolated rocky massif rising island-like to the south-east of Marāl-bāshi (Map No. 15. c. 7) has, of course, no bearing whatsoever on the orographical nexus above indicated; see the next note.

[2] Regarding the folk-lore beliefs which cause isolated hills to be looked upon as sacred and chosen for the location of shrines, or 'Mazārs', like the 'Svayambhū Tīrthas' of India, cf. *Ancient Khotan*, i. pp. 313 sq.; also below, pp. 1302, 1310.

[3] The photograph in Fig. 332, taken far away at a desert hill rising from the plain near Marāl-bāshi, curiously illustrates also the formation of the rock strata as they appear on the north slopes immediately below the Mazār-tāgh ruins.

of wood. The outside wall on the south-west of iv had completely disappeared, except for remains of layers of Toghrak branches at the south corner. Fallen timber strewed the slope some 150 feet lower down in plenty. The fall of the wall was evidently due to the foundations here having slid down the precipitous rock ledge. It was through a gate on this side that the keep-like main structure within the fort i (Fig. 330) was entered. This appeared to have been originally built with walls of coarse brickwork, 4 feet thick, which were subsequently strengthened to a thickness of 8 feet on the north, east, and south. The fact that the main west wall of the fort adjoining i was built of a different material seems to indicate that i was the earliest structure occupying the site. It had contained more than one story; for the square holes found in the walls, well below their top level in their present broken condition, were obviously intended to carry a flooring. The interior space, 20 feet square, was found filled with débris including burned timber to a height of some 7 feet.

Walled outer court.

On the north-east a narrow apartment, ii, 20 feet long and only 6 feet wide, had been spared between the 'keep' and the fort wall (Fig. 331). The latter was found here much broken, and through it ii appeared to have communicated with the outer court v by means of a flight of stairs. This court v, situated on a level more than 20 feet lower than the area of the fort proper, was clearly marked as a later addition. Its walls, though also of considerable thickness and built with sun-dried bricks of the same size as those of the fort, lacked the strengthening layers of tamarisk brushwood and the timber reinforcing the latter, and consequently had suffered more damage, especially at the north corner. The space enclosed by them, about 90 feet by 29, had probably been roofed over; for charred timber was abundant among the débris and refuse, and all the brickwork was reddened by fire. The masses of horse-dung found on clearing the space along the north-east wall and elsewhere showed plainly that this outer court, through which the fort was entered, had served mainly for stabling. The gate led through the 10-feet thick wall on the south-east.

Tower crowning hill-crest.

The tower (Fig. 329) which crowned the crest, at an elevation of 225 feet above the top of the clay banks by the river-bed and at a distance of over 60 yards from the west bastion of the fort, was of remarkable solidity. In construction, size, and conical shape it curiously recalled the familiar watch-towers of the Tun-huang Limes. It was built of flat and fairly regular pieces of hard clay, no doubt brought from the banks lining the foot of the hill above the river, with layers of tamarisk branches at intervals of 10 inches and Toghrak posts and beams inserted in the masonry. Its base measured 25 feet on the south-west and north-east, and apparently 22 feet on the two other sides. But, as the south-east face was badly broken, the apparent greater length of two sides cannot be depended upon. The extant height was over 20 feet. Even without ascending to its top, the view ranged far up and down the broad bed of the river and its jungle belt, and beyond to the distant high ridges of bare sands.

Excavation of 'keep'.

The excavation of the remains within the fort was but the beginning of labours which were to keep us busy for three long and hot days. Marks of recent burrowing within the 'keep' i clearly showed where the Tibetan wooden slips brought to me at Islāmābād had been obtained. But these diggings had left the heavy débris lower down undisturbed, and on clearing this a number of Tibetan documents on small tablets, exactly like those found in the Mīrān fort, were recovered, besides rarer fragments of Tibetan records on paper. More of such relics, evidently left behind by the last occupants of the fort, turned up among débris thrown into the recess iii outside the entrance of the room i. Of miscellaneous small objects found in the latter I may mention a reed pen, M. Tagh. i. 006, cut with nib exactly as a pen found at Mīrān; a wooden die, M. Tagh. i. 007, with numbers arranged as in its ivory pendant from Mīrān; a wooden key of the Khādalik type, M. Tagh. i. 0011; and the well-made terra-cotta saucer in the form of a tortoise, M. Tagh. i. 0029 (Plate LI).

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327. TEMPERA PAINTING ON WALL OF RUINED SHRINE Ta. ii, MAYAKLIK, SHOWING SEATED BUDDHA BETWEEN VESICAS OF COLOSSAL FIGURES.

328. PAINTING IN TEMPERA OF FOUR-ARMED DIVINITY, ON INNER PASSAGE WALL OF RUINED SHRINE Ta. i, NEAR MAYAKLIK.

329. RUINED FORT AND WATCH-TOWER ON MAZĀR-TĀGH RIDGE SEEN FROM NORTH-WEST.
Bed of Khotan River and jungle belt on its right bank in distance below.

330. INTERIOR OF RUINED FORT OF MAZĀR-TĀGH, WITH REMAINS OF KEEP IN CENTRE AND NORTH BASTION ON RIGHT.

A curious discovery in i was that of a large store-pit, sunk into the ground to a depth of over $5\frac{1}{2}$ feet and about 6 feet square. It was carefully revetted with timber, and like the large planks which had formed its covering, together with a small trap-door, had escaped the final conflagration. The pit was found completely empty, to the great disappointment of the men, who confidently looked out here for 'treasure'. That it had served for the keeping of stores is certain.

Finds in room ii.

The finds made in the narrow room ii included, besides half a dozen Tibetan records, a triangular mould in hard stucco, M. Tagh. ii. 0010, for casting seated Buddha relievos. It scarcely needed this discovery to assure me that the 'Hill of the sacred shrine' must have already possessed its sanctuary in Buddhist times. But it was not until my renewed visit in November, 1913, that I actually traced its remains—under the very enclosure of one of the previously mentioned stacks of ex-voto decked staffs which are now worshipped by wayfarers as the resting-places of anonymous Muhammadan saints. The dozen or so of very flat and roughly made pottery bowls about 5 inches in diameter which were unearthed in a corner of room ii might possibly have served for sacrificial purposes.

Clearing of area iv.

The clearing of the large area iv within the main fort walls yielded but scanty finds. The ground proved to be covered with burned brick fragments and charred timber to a height of 3 to 5 feet. All relics of perishable material must have been destroyed here by a great conflagration. Two large pottery jars were found embedded in the floor. One measured 2 feet 6 inches in height, with a greatest width of 2 ft. 4 inches and a mouth 10 inches across. The other was but slightly smaller. The low neck, only about $1\frac{1}{2}$ inches high, suggested that these jars may have been used for storing water. Within the larger one there turned up two copper coins bearing the *nien-hao* Ch'ien-yüan (A. D. 758–60), and a third coin of the same date was found near the other jar. And here I may conveniently mention that of the remaining six coins actually found by us on the ground in the immediate vicinity of the ruins, or embedded in the refuse-layers below the fort, not less than four were Ch'ien-yüan pieces, while one bore the *nien-hao* Ta-li (A. D. 766–80) and another the legend *K'ai-yüan* in use throughout the T'ang period.[4] The valuable chronological evidence thus supplied will be considered further on.

Coin finds.

Big refuse-layers on slopes.

Far richer in relics of all kinds than the ruined fort itself proved the big layers of ancient refuse which were discovered in the course of the first day's work on the steep rock slope below it to the east and north-east. They extended from near the gate of the outer court v to beyond the north corner of the latter for a distance of about 190 feet. Their greatest width over the slope was about 70 feet, and their depth, as seen in the photograph (Fig. 334), up to 4–5 feet in places. These masses of refuse, made up mainly of straw, dung, animal bones, and the like, from the first vividly recalled by their look and still pungent odours the huge rubbish deposits with all their unspeakable dirt which those old Tibetans had left behind in the ruined fort of Mīrān. Here, too, there could be no doubt that the refuse accumulations owed their origin mainly to the presence of a Tibetan garrison; for Tibetan records on wood and paper emerged in plenty as soon as the systematic clearing was begun, and continued to preponderate throughout among the written remains of the thick consolidated layers. The conditions had been exceptionally favourable for the preservation of all their

[4] See Appendix *B*. The *Ta-li* piece, together with a *Ch'ien-yüan* coin, was found stuck on a small stick, M. Tagh. c. 005 (Pl. LI).

In view of the very definite chronological evidence furnished by the coins actually found at the ruins, it is curious to note that of the twelve coins brought to me at Islāmābād and said to have been obtained from Mazār-tāgh eleven are much-worn *Wu-chu* or 'goose-eye' pieces, while the twelfth, with an inscription not otherwise known to me (Pl. CXL, No. 35), is described by Mr. J. Allan as a *Wu-chu* coin of A.D. 581–604; see Appendix *B*. Is it possible that these pieces come from some 'Tati' above or near Mazār-tāgh the existence of which I heard mentioned in vague talk and also by my old guide Turdi, but which I could not verify? See also *Ancient Khotan*, i. p. 579.

mixed contents. No moisture whatever could rise from the river below to the height of this rocky ridge, absolutely clear of any vestige of vegetation. The elevated position and the outlying lower ridge already referred to kept off dunes and prevented erosion by drift-sand.

Clearing of rubbish deposits.

The clearing of the rubbish deposits was started the first day on the slope just below the approach to the outer gate of the fort. On the two following days it was extended westwards to beyond the north corner of v, the sections cleared each day being marked *a–c*. In each section the work was carried from the bottom of the slope upwards, and the written records as they emerged were gathered into bags numbered consecutively with Roman figures, as it was impossible to keep count of individual pieces, the number of which in the end rose to close on a thousand. The uniform distribution of the refuse along the whole length of the outer court proved plainly that it must have been thrown indiscriminately over different portions of its north-east wall, and this makes it impossible to determine any chronological sequence among the deposits. Before referring to their rich yield of records I may briefly mention the more interesting among the miscellaneous objects recovered.

Miscellaneous relics of garrison.

Modest finds in themselves, they all help to illustrate the conditions of life prevailing at this forlorn little guard-station in the desert. The arms provided for its garrison are adequately indicated by a number of arrow-shafts, M. Tagh. a. 0013–16; b. 007–10 (Plate LI), some unfinished and one with a leaf-shaped sheet of bronze in the place of feathers; pieces of broken bows made of tamarisk wood, M. Tagh. a. 0017–18 (Plate LI); wooden sheaths for short sword and dagger, M. Tagh. a. 004–5. There are numerous cast-off shoes worked in various kinds of woollen and felt materials and sometimes quilted in different patterns, M. Tagh. a. 0039, 0041–5, all suggesting by their thickness and large size that rigorous cold had to be guarded against. String sandals, too, of the type familiar from Lou-lan and the Tun-huang Limes were also represented, M. Tagh. a. 0040 being a specimen. By the side of numerous fabric remnants, evidently from clothing, made of wool and mostly of purple or bright red colour, the absence of finer textiles, especially of silk, was significant. Of the single silk brocade fragment, M. Tagh. a. iv. 00177, it should be noted that its weaving closely resembles that of a piece found at the Tibetan fort of Mīrān. Wooden eating-sticks are represented by two pairs, M. Tagh. a. 0019 (Plate LI); c. 002. Pieces of netting, M. Tagh. b. 005, 0017, show that the chances of fishing were used when the river brought down its flood-water. Wooden dies, like M. Tagh. a. 0031; iv. 00172, with holes or inked circles arranged in the same way as at the Mīrān fort, point to what obviously was a prevalent pastime among these Tibetan soldiers. The numerous wooden seal-cases, of a type closely corresponding to those found at the stations of the Tun-huang Limes, M. Tagh. a. 0025–6; iv. 00173, etc., would suffice, even without the abundance of 'miscellaneous papers', to prove the maintenance of regular communications with and through this outlying post. The use of wooden keys and locks, similar to those found at the sites round Domoko, is attested by a number of specimens, M. Tagh. b. 0012–15, etc.

Tibetan documents.

It is, however, to the documents preserved in these deposits of rubbish that we must look chiefly for data bearing on the character of the ruined fort and the time of its occupation. As regards the latter the mere fact that the vast majority of the records recovered is Tibetan is a sufficiently clear indication.[5] We know from our historical sources that the predominance of Tibetan power in Eastern Turkestān commenced soon after the middle of the eighth century, that by A. D. 791 the Chinese 'Protectorates' of An-hsi, i. e. Kuchā and Pei-t'ing (near Guchen), finally succumbed to it, and that Tibetan supremacy in these regions was maintained until the Uigurs established a great kingdom about A. D. 860 in the northern territories and westernmost Kan-su.[6] The Khotan region

[5] For reproduction of specimens of Tibetan records, see Pl. CLXXII.

[6] For references, see the brief synopsis of this period given in *Ancient Khotan*, i. p. 63 sqq., and for details about the end of Chinese control in the Tārīm Basin, M. Chavannes' *Note additionelle*, *ibid.*, i. pp. 533 sqq.

may have remained under Tibetan influence somewhat longer. That the great mass of the Tibetan records found at Mazār-tāgh, on wood and paper, must be assigned to this period cannot be subject to doubt; for the inference drawn from their language and contents is fully confirmed by the evidence of the coin finds already set forth above, as well as by the exact date furnished by one of the Chinese documents which will be presently mentioned. It is equally certain that the prevailing character of the contents is that of short military reports, requisitions, statements about arms, supplies, and the like, as might be expected at an advanced post controlling an important route. But the inventory prepared by Dr. A. H. Francke from which this general information is derived is not at present within my reach, and, as his published notes on the Tibetan documents of my collection [7] do not distinguish between records from Mazār-tāgh and Mīrān, I must leave the examination of any data of antiquarian or topographical interest to be gathered from them until later.

Documents in Khotanese language.

Neither Tibetan nor preceding Chinese political control is likely to have interfered with the use of the Khotanese language for purposes of local administration and personal communication in the Khotan region. This observation resulted already from previous finds of documents in Brāhmī script (Cursive Gupta) and Khotanese language at Dandān-oilik and elsewhere, and the considerable number of similar records found at Mazār-tāgh, over seventy in all, has fully confirmed it.[8] They are mostly on paper, but a few are on wood, and some in complete preservation. On certain of the Brāhmī paper documents red seal impressions can be traced, such as are frequent on Tibetan papers both from this site and the fort of Mīrān. A number of bilingual records, with Khotanese text on one side and Tibetan or Chinese writing on the other,[9] deserve special notice. They attest the need which must have made itself felt in administrative routine for the concurrent use of the local language along with that of the power in military and political control.

Manuscript fragments in Uigur and other scripts.

Here it may conveniently be mentioned that the fragmentary papers found in the Mazār-tāgh refuse-heaps include also two in Uigur and another small piece, M. Tagh. a. 0048, showing a script which seemed to me to be derived from Aramaic and possibly Early Sogdian. If the much-effaced writing on the fragment of a wooden tablet, M. Tagh. a. III. 0061, is really Kharoṣṭhī, as I thought at the time, it must obviously go back to a very early period of the occupation of the site. On the other hand, a paper fragment bearing what seemed to me a line of very cursive Arabic writing need not necessarily take us lower down than the Tibetan period; for we know that the Tibetans were in contact with the Arabs west of the Pāmirs early in the eighth century, and that Arabs from Western Turkestān actually found their way right into China by A. D. 757.[10]

Chinese records of T'ang times.

Notwithstanding the relative insignificance of their number, the Chinese documents from the rubbish-heaps, all on paper, are of particular value on account of the antiquarian information which they furnish, and which M. Chavannes' learning and minute care have fortunately rendered accessible. It is solely on the translation and comments of that lamented great scholar that the following observations are based.[11] In the first place should be mentioned the well-preserved document, *Doc.* No. 974 (Plate XXXVI), which bears a full date of A. D. 786. It is an official certificate—whether a clean copy or a draft is not certain—issued by the chancellery of a high Chinese dignitary bearing the title of *Tu fu shih.* Owing to the uncertain reading of a character, repeatedly recurring

Document dated A.D. 786.

[7] See *Notes on Sir Aurel Stein's collection of Tibetan documents from Chinese Turkestan*, *J.R.A.S.*, 1914, pp. 37 sqq.; also above, pp. 467 sq.; below, Appendix *G.*

[8] For specimens of such records, see Pl. CLI; cf. also below, Appendix *F.*

[9] See e.g. M. Tagh. c. 0020, Pl. CLI; M. Tagh. b. 002, in Chavannes, *Documents*, Pl. XXXII, No. 963. For similar bilingual pieces from Balawaste and Mazār-toghrak, see *ibid.*, Pl. XXXVII, Nos. 977, 981, 982.

[10] Cf. Chavannes, *Turcs occid.*, pp. 290 sq., 299; *Ancient Khotan*, i. pp. 62 sq.

[11] Cf. Chavannes, *Documents*, pp. 201–17.

in the text and important for its comprehension, M. Chavannes has with critical caution refrained from translating the contents. Chiang Ssŭ-yeh thought that he could interpret the document as a kind of passport or safe-conduct. To the time when the Chinese administration still maintained its authority, at least over parts of the Tārīm Basin, belongs undoubtedly also the fragmentary document No. 951. It mentions a Chinese military officer of high grade as well as An-hsi, i. e. Kuchā, the seat of the 'Protectorate of An-hsi' from A. D. 658 to 787. The same observation applies also to the fragments Nos. 962 and 967, the first containing the petition of a certain village and the other naming the servant of a Chinese official who bears a very exalted distinction of T'ang times.

Chinese monastic accounts.

Accounts of a very humble description referring to food issues and the like are found in Nos. 963, 968. Fragments of Buddhist Sūtra texts, Nos. 955–61, the last with a Tibetan reverse, and of a dictionary, No. 973, do not give any definite indication of their origin; nor does the writing exercise, No. 965, offered by a certain pupil who states his family and its residence. But distinct antiquarian interest attaches to the three large leaves and the portion of a fourth, *Doc.* Nos. 969–72 (Plates XXXIII–XXXV), which present us with the detailed and duly authenticated daily accounts of the expenditure incurred by a Buddhist monastery during the last three months of a year and the first of the next. Unfortunately no *nien-hao* is given, but M. Chavannes ascribed this very curious record, no doubt with good reason, to the seventh or eighth century. The leaves, which measure a trifle over 19 inches in length and over 11 inches across, were found folded up into one narrow roll and secured by silk stitches, evidently for mere purposes of record after the accounts were closed. Great care was taken about their verification; for after intervals of a few days the entries were regularly signed by the monk acting as steward or bursar for the year, and in addition countersigned by the 'Karmadāna General', the Vihārasvāmin, and the Sthavira of the monastery.

Position of monastery.

There is no direct indication as to where the monastery was situated. But from the constant references made to outlays on creature comforts and luxuries, unthinkable in a desert locality like Mazār-tāgh, it appears to me quite certain that this curious monastic account must have found its way here from a distance. There is other evidence also to support this conclusion. The notes concerning certain items show that the monastic establishment lay within a cultivated populous tract and in the vicinity of other Buddhist Vihāras.[12] That this locality belonged to the Khotan region appears to me very probable in view of the position of Mazār-tāgh and of the mention of a payment which was made on behalf of a monastic servant to the tax-collector of a certain rural district in the 'Hsi-ho 西河 region'.[13] In this 'region of the Western River' M. Chavannes has, I believe, rightly recognized a reference to the cantons west of the Kara-kāsh. These are now, too, commonly comprised under the general designation of 'Kara-kāsh' taken from the name of the river. The location of the monastery in the Khotan region agrees well with the repeated mention of purchases of wine and of carpet and felt making. These are all local products for which Khotan was already famous in early times.[14]

Dating of accounts.

That the exactly recorded prices for all kinds of food-stuffs, commodities, and labour are of considerable interest for the economic history of the country does not require to be emphasized.

[12] Thus in No. 969 we read of payments made on behalf of monastic dependants to tax-collectors of certain quarters of 'the town' (lines 12, 13); of payments on account of wine purchased 'for the people' of certain localities at the request of two shrines (ll. 16, 17). In No. 970 we find a record of wine purchased for those engaged in agricultural labour on account of a certain shrine (line 4); entries of payments made to the tax-collector of a certain quarter of the capital (line 12); a record of the remuneration paid for painting dragons and phoenixes on banners, etc., to be used in a town procession (line 17), etc.

[13] See Chavannes, *Documents*, No. 971, line 13; p. 215, note 6.

[14] Cf. Chavannes, *Documents*, No. 969, ll. 5, 11, 16, 17; No. 970, ll. 2, 6; *Ancient Khotan*, i. p. 134.

But in the absence of any direct date record, special attention may be called to such incidental statements as those of services held for the benefit of a Chinese army engaged on a difficult expedition; of fruits, etc., purchased for 'secretaries of the escort', attached to military headquarters, or of presents sent for the funeral of a high Chinese commander.[15] All such references prove clearly that these monastic accounts belong to a period when China still exercised effective military control in these regions, and hence are not likely to date much later than the first half of the eighth century.

Early watch-station guarding route.

This brings us finally to the question of the character and history of the desert post to the prolonged occupation of which we owe those extensive deposits of refuse and their varied documentary contents. It is obvious that the solitary Mazār-tāgh hill, by its height and commanding position, offers exceptional advantages for a watch-station to guard the route by the river and to control traffic passing along it, and that these advantages must have been appreciated from an early period. They were bound to suggest the site as a natural frontier station for Khotan on the only practicable route leading northward. Under favourable atmospheric conditions, fire and smoke signals, lit on the top of the isolated ridge rising relatively high above the flat desert plain, would be visible over very great distances. It may hence be safely assumed that the position was utilized in this way, at least temporarily, long before the ruined fort was built. The outlying watch-tower on the hill crest, with its very solid construction of distinctly ancient appearance, may well date back to such an earlier occupation.

Tibetan occupation of *Mazār-tāgh* and *Mīrān*.

On the other hand, it is certain that the last occupants of the fort were Tibetans, and that the masses of rubbish found below it were deposited during the prolonged stay of a Tibetan garrison. All this points to the conclusion that the Mazār-tāgh station had assumed increased importance during the troubled times of the latter half of the eighth century, when the Tibetans first overran the oases in the south and west of the Tārīm Basin and finally completed their conquest by taking Pei-t'ing (A. D. 790) and Kuchā. We have seen above that the fort of Mīrān, placed in an exactly corresponding position to command an important route leading eastwards, must have held its Tibetan garrison during the same period.[16] The close agreement in the nature and contents of the Tibetan records found at both forts, which Dr. Francke's preliminary analysis proves, is thus wholly accounted for. The indications which their fuller study may be expected to yield hereafter as to the character of the Tibetan domination in the Tārīm Basin, the military and administrative methods for maintaining it, etc., will possess all the more historical interest on account of the fact that so great a distance, well over 700 miles by road, separates the two fortified posts guarding routes through the desert.

OBJECTS EXCAVATED AT RUINED FORT OF MAZĀR-TĀGH

M. Tagh. i. 001. Six frs. of firm woollen (?) braid, pinkish buff. Width $\frac{7}{8}''$, gr. length $5\frac{1}{2}''$.

M. Tagh. i. 002. Disc of white stone, opaque, pierced longitudinally. Diam. $\frac{3}{4}''$, thickness $\frac{1}{4}''$.

M. Tagh. i. 003. Thin piece of bronze foil cut in form of leaf. $2\frac{5}{8}'' \times 1\frac{1}{8}'' \times c. \frac{1}{100}$. Pl. LI.

M. Tagh. i. 004. Clay spinning-whorl. Flat disc, pierced. Diam. $1\frac{7}{16}''$, thickness $\frac{3}{16}''$.

M. Tagh. i. 005. Iron pin, lozenge-shaped in section. Head an elongated four-sided point on round neck. Length $2\frac{3}{4}''$, diam. $\frac{3}{16}''$ (head) to $\frac{1}{16}''$. Pl. LI.

M. Tagh. i. 006. Reed pen, cut with nib as M. I. xlii. 003. Charred, and broken. Length $2\frac{1}{4}''$.

M. Tagh. i. 007. Wooden die, roughly cubical. Numbers painted in ink circles, and arranged as in M. I. iii. 004. Cf. M. Tagh. a. 0031; IV. 00172. $\frac{5}{8}'' \times \frac{1}{2}''$ sq.

M. Tagh. i. 008. Oval piece of brown leather with dressed surface. Semicircular slit parallel to one side. $1'' \times \frac{3}{4}''$.

M. Tagh. i. 009. Fr. of glass from rim of vessel, bluish-green, translucent. Edge thickened on each side, and rounded. Gr. M. 2", thickness $\frac{3}{16}''$ to $\frac{1}{10}''$.

[15] Cf. Chavannes, *Documents*, No. 969, ll. 2, 3, 19 sq.

[16] See above, pp. 474 sqq.

M. Tagh. i. 0010. Horn comb, shaped as M. Tagh. a. 002. Teeth all broken. Width $2\frac{1}{2}''$, H. of handle $\frac{7}{8}''$, sixteen teeth to $1''$.

M. Tagh. i. 0011. Wooden key for lock of type Kha. v. 006. Holes for six pegs (all missing) arranged ∴∶· Traces of dark paint. Hard and well preserved. Length $4\frac{7}{8}''$ ($1\frac{7}{8}''$ handle), width $1\frac{5}{8}''$, thickness $\frac{9}{16}$.

M. Tagh. i. 0029. Fr. of terra-cotta saucer in form of tortoise. Extant part shows head and forefeet. Eyes shown by deep circular groove round central dot; two indentations represent nostrils; broad slit for mouth, with three cross-slits to indicate teeth. Body scored one side with rough lozenge-pattern. Back hollowed out for bowl. Clay on broken surface brick-red. Surface buff. Well-made. $3'' \times 3'' \times 1\frac{1}{2}''$. Pl. LI.

M. Tagh. ii. 001. Fr. of horn comb like M. Tagh. i. 0010. Teeth broken, and one end lost. H. of handle $\frac{15}{16}''$, width (orig.) *c.* $3''$, thirty teeth to $1''$.

M. Tagh. ii. 009. Pottery jug with globular body, short neck, and slightly spreading mouth; loop handle from mouth rim to shoulder; flat base. Hand-made. Coarse red clay. H. $3\frac{1}{8}''$, diam. (with handle) $3\frac{1}{2}''$.

M. Tagh. ii. 0010. Triangular stucco mould for casting seated Buddha relief; triangular also in section, top broken off. Mould on widest face shows Buddha seated on lotus, hands in lap, circular vesica and halo. Hard red stucco (plaster of Paris ?). $3'' \times 2\frac{7}{8}'' \times 1\frac{7}{8}''$.

M. Tagh. iv. 001. Piece of calcined bone, tapering, and squared to give oblong section. Cross-diagonal incisions on narrow sides, and same on broad with straight incisions between. $2'' \times \frac{1}{2}''$ to $\frac{5}{16}'' \times \frac{7}{16}''$ to $\frac{1}{4}''$.

M. Tagh. iv. 002. Wooden stick ending in turned knob on narrow neck orn. with mouldings. Other end broken. Length $4\frac{3}{4}''$, diam. stick $\frac{1}{2}''$, diam. neck $\frac{5}{16}''$, diam. knob. $\frac{3}{4}''$.

OBJECTS EXCAVATED FROM REFUSE-HEAPS BELOW MAZĀR-TĀGH FORT

M. Tagh. a. 001. Small ring of whitish felt for steadying weights carried on head. Sewn with string. See M. Tagh. a. 0034. Diam. outside $3\frac{1}{8}''$, thickness $\frac{3}{4}''$.

M. Tagh. a. 002. Wooden comb. Back flatter than usual, but still curved, one end broken off. Cf. L.A. vi. ii. 0014. Width *c.* $4''$, H. $2\frac{3}{8}''$, length of teeth $1\frac{5}{16}''$, twelve teeth to $1''$.

M. Tagh. a. 003. Wooden knife-handle, straight, elliptical in section, with socket from which blade is lost. Hard, but split. $5\frac{1}{2}'' \times 1'' \times \frac{3}{4}''$ to $\frac{1}{2}''$.

M. Tagh. a. 004. Wooden sheath for dagger or straight sword, end of. Made of two hollowed strips of wood placed face to face and covered with strip of leather apparently glued. $5\frac{3}{4}'' \times 1''$ to $\frac{5}{8}''$ to $\frac{3}{8}''$.

M. Tagh. a. 005. Wooden sheath for dagger, end of; as M. Tagh. a. 004, but longer. Here instead of a broad strip of leather folded round, a narrow strip is wound round. Chigan (?) wood. $6\frac{1}{8}'' \times 1\frac{3}{16}''$ to $\frac{7}{8}'' \times \frac{13}{16}''$ to $\frac{9}{16}''$.

M. Tagh. a. 006–007. Two wooden writing-slips, blank; each with string-hole. Length $5\frac{1}{4}''$ and $5''$.

M. Tagh. a. 008. Wooden pen; stick with bark on, trimmed to point, as T. XII. 007. Length $7\frac{1}{8}''$.

M. Tagh. a. 009. Wooden weaving-stick (?), cut down somewhat roughly to short end in which is hole. See L.B. 0011. Length $1'\ 1\frac{1}{8}''$. diam. $\frac{1}{2}''$ to $\frac{1}{10}''$.

M. Tagh. a. 0010. Wooden spatula with flat oblong bowl. Roughly cut. Length of whole $6\frac{5}{8}''$, of bowl $2\frac{1}{8}''$, gr. width $\frac{11}{16}''$.

M. Tagh. a. 0011. Wooden spatula with flat oblong bowl, as M. Tagh. a. 0010. Neatly cut. Handle ends in lozenge. Length of whole $6\frac{3}{16}''$, of bowl $1\frac{1}{2}''$, gr. width $\frac{3}{4}''$. Pl. LI.

M. Tagh. a. 0012. Paper fr., thin, felted. Much torn; has been used for carrying red-ink powder for seals. $11'' \times 3\frac{1}{4}''$.

M. Tagh. a. 0013. Fr. of wooden arrow-shaft; feather-end complete, other end broken. Tapers slightly towards intact end, but thickens again at tip to take notch. This end for $1\frac{3}{16}''$ shows marks of lacquer and binding; below remain traces of three feathers, *c.* $5''$ in length, arranged in gradual spiral so that they do a quarter-turn of the shaft in their length (the effect of this would be to impart a left-hand spin). At their end is again a ring of lacquer round shaft. Cf. T. XIX. i. 006. Length $10\frac{1}{2}''$, diam. $\frac{1}{4}''$ to $\frac{3}{8}''$. Pl. LI.

M. Tagh. a. 0014. Wooden arrow-shaft, like M. Tagh. a. 0013, apparently complete in length, but never finished. Notch cut, but no marks of lacquer or feathers. Tapering towards both ends. Length $10\frac{3}{8}''$, diam. $\frac{3}{8}''$ to $\frac{1}{4}''$.

M. Tagh. a. 0015. Fr. of wooden arrow-shaft, like M. Tagh. a. 0013. No marks left of feathers. Traces of red paint and lacquer. Length $5\frac{1}{2}''$, diam. $\frac{5}{16}''$ to $\frac{1}{4}''$.

M. Tagh. a. 0016. Wooden stick broken at one end, trimmed round. Prob. intended for arrow-shaft. Length $10\frac{3}{4}''$, diam. $\frac{3}{8}''$ to $\frac{5}{16}''$.

M. Tagh. a. 0017. Upper end of recurved wooden bow, triangular in section. At tip, hole for suspension; $2\frac{1}{2}''$ lower is notch for string, which has worn the sides. For $5''$ from lower end wood is pared down to take binding, now gone. Wood probably of tamarisk. Length (straight) $12\frac{1}{2}''$, gr. width $\frac{7}{8}''$, gr. thickness $\frac{13}{16}''$. Pl. LI.

M. Tagh. a. 0018. Upper end of recurved wooden bow, as M. Tagh. a. 0017. Remains of binding of bark strips for $4\frac{1}{2}''$ at lower end. Length $11''$ (straight), width $\frac{7}{8}''$ to $\frac{3}{16}''$, thickness $\frac{7}{8}''$ to $\frac{5}{8}''$. Pl. LI.

M. Tagh. a. 0019. Pair of wooden eating-sticks (?), trimmed round, ends bluntly bevelled off. Towards upper

end the stick is tapered gradually, but a knob of orig. thickness is left at tip, beneath which string is tied joining the two. Cf. M. Tagh. c. 002; L.A. I. iv. 006–7. Length $8\frac{1}{4}''$, diam. $\frac{1}{4}''$; length of string $4\frac{3}{4}''$. Pl. LI.

M. Tagh. a. 0020. Fr. of iron foil, flat, pierced with eleven holes (diam. *c.* $\frac{1}{8}''$) spaced irregularly; has one straight and one curved edge; others broken. Rusted. Scale of armour (?). $2\frac{1}{8}'' \times 1\frac{5}{8}'' \times \frac{1}{32}''$.

M. Tagh. a. 0021. Wooden key, for lock of type Kha. v. 006. Six pegs, now broken, arranged ·:· Neatly cut. Length of whole $5\frac{3}{8}''$, of handle $2\frac{1}{2}''$; width $1''$, thickness $\frac{3}{4}''$.

M. Tagh. a. 0022. Wooden bolt for lock of type Kha. v. 006. Six peg-holes arranged ·:·: near one end. Groove is on upper surface, not side, so that check-pin in this case must have been fixed in tumbler-block. Groove $3\frac{3}{8}'' \times \frac{3}{16}''$; it had a wooden peg driven into it $\frac{1}{4}''$ from each end, shortening it to exact length wanted; one broken off. $5\frac{3}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{2}''$.

M. Tagh. a. 0023. Wooden bolt as M. Tagh. a. 0022; but has socket on under side to guide key, and six peg-holes, arranged ·:·: Groove for check-pin on upper surface ($3'' \times \frac{1}{2}'' \times \frac{3}{16}''$); its side cut away to edge of block. $6\frac{3}{8}'' \times 2'' \times \frac{5}{8}''$.

M. Tagh. a. 0024. Top of pottery water vessel with round cap and small orifice. Coarse red clay. Top of cap scored with rough wheel-pattern and edge crinkled like pie-crust. Hand-made. Diam. $3''$, H. $1\frac{3}{4}''$. Pl. LI.

M. Tagh. a. 0025–6. Two wooden seal-cases, cf. T. VIII. 5, type A, but with only one groove in sides. 0026 still keeps string and part of clay sealing; 0025 has fr. of clay. Roughly cut. *0025*, $2'' \times \frac{3}{4}'' \times \frac{3}{4}''$; *0026*, $1\frac{1}{4}'' \times \frac{3}{4}'' \times \frac{5}{8}''$.

M. Tagh. a. 0027. Half of wooden comb, with slightly arched back, as M. Tagh. a. 002. H. $2\frac{1}{4}''$, width (broken) $1\frac{3}{4}''$, length of teeth $1\frac{1}{8}''$, twelve teeth to $1''$.

M. Tagh. a. 0028–9. Two cylindrical wooden blocks, each with wide groove round middle, rope-worn (?). Prob. 'toggles' for tightening knots. Length: *0028*, $1\frac{1}{2}''$; *0029*, $1''$; gr. diam. $1\frac{1}{8}''$.

M. Tagh. a. 0030. Bronze rivet-plate from buckle, as Kelpin. 0012. Oblong with oblong slit and pin-holes at corners. $1'' \times \frac{3}{4}''$, slit $\frac{1}{2}'' \times \frac{1}{4}''$.

M. Tagh. a. 0031. Cubical wooden die, marked by holes arranged in present-day way. See M. Tagh. i. 007; a. IV. 00172; M. I. iii. 004. $\frac{5}{8}''$ cube.

M. Tagh. a. 0032. Thistle-shaped knob of white stone. Stem broken off. Cf. M. Tagh. 0029. H. $\frac{5}{8}''$, gr. diam. $\frac{5}{8}''$.

M. Tagh. a. 0033. Tangle of stout hemp (?) string, two-ply.

M. Tagh. a. 0034. Ring of felt sewn with string over leather (?) core. Cf. M. Tagh. a. 001. Diam. outside $2\frac{1}{4}''$, thickness $\frac{1}{2}''$.

M. Tagh. a. 0035. Strip of felted paper (?), doubled and tied round with string in middle, and painted on one side with lozenge-pattern in red lines. Surface layer is separating from back. $7'' \times \frac{5}{8}''$.

M. Tagh. a. 0036. Irregular strip of reddish-yellow felt. $5\frac{1}{2}'' \times 1\frac{1}{4}''$.

M. Tagh. a. 0038. Two strips of buff felt sewn together along their length. $8'' \times 2\frac{1}{2}''$ to $\frac{3}{8}''$.

M. Tagh. a. 0039. Shoe of strong buff woollen fabric. The uppers formed of one strip of this material lined with thick buff and brown felt, and seamed up toe; the sole of firm doubly interwoven hemp and goat's-hair string compacted with wear and sand. Fabric and lining of uppers quilted together by parallel rows of stitching, and attached to sole by over-heading with stout hemp string. Heel strengthened by external patch of yellow felt, worn through. Fastening apparently a draw-string round opening. Length $11''$, gr. width $5\frac{1}{2}''$.

M. Tagh. a. 0040. String sandal, made in same fashion as L.A. VI. ii. 0025; but short strings forming uppers and continuous all round sole, thus forming complete shoe. They are gathered into two groups, for heel and toe respectively, by double draw-strings which terminate in front of arch of foot; draw-strings of back group ending in loops, and those of front groups in loose strings which were drawn through loops and knotted, thus securing shoe. Length $12\frac{1}{2}''$, gr. width $4\frac{1}{8}''$.

M. Tagh. a. 0041. Quilted buff felt shoe. Sole and uppers made each in two longitudinal pieces joined respectively along middle of sole, and up middle of front and back of heel. Edges of sole turn up well at toe, heel, and sides, so that seam of junction with uppers is saved friction with ground. Comes up high round ankle, where are signs of draw-string. Felt throughout is thick and quilted; the sole being run with close-set rows of strong hemp string, and uppers orn. with stitching in imbricated scale pattern. Rough leather patches have been applied to sole at heel and toe, and on each edge of uppers. Length $10''$, gr. width $4''$, H. at ankle $3\frac{3}{4}''$.

Inside two frs. of carmine woollen cloth, plain and diagonal weave respectively. Gr. M. $1' 9''$.

M. Tagh. a. 0042. Shoe of buff woollen (?) fabric lined with felt, of same type as M. Tagh. a. 0039, but much worn. Felt gusset, covered with ornamental stitching, joins edges of uppers over front of foot. Felt patch applied both to heel and toe. Length $10''$, gr. width $4\frac{1}{2}''$.

M. Tagh. a. 0043. Shoe of dark brown woollen fabric lined with felt. Uppers only remain, formed of one strip of coarse fabric, lined with similar strip of buff felt, and seamed up front of toe. Fabric and felt quilted together by close-set parallel rows of stitching in dark

brown woollen yarn. Above toe-seam, edges of uppers further joined over front of foot by buff felt gusset, covered with orn. open-work stitching in dark brown. Round opening of shoe thus left is stitched an upstanding band of same brown fabric, lined with dark blue woollen fabric of herring-bone weave, forming a sort of half-boot and apparently pinned at side of ankle, where it is finished off in fringe. Length $9\frac{1}{4}$", gr. width (flat) $6\frac{1}{2}$".

M. Tagh. a. 0044. Quilted buff felt shoe, of same make as M. Tagh. a. 0041. Only uppers and strip of sole on each side remain. Small gusset inserted at top of seam joining uppers in front. Insect-eaten. Length 11", gr. width (flat) 8".

M. Tagh. a. 0045. Uppers of quilted buff felt shoe; similar in make to M. Tagh. a. 0041, but stitching in zig-zag rows, not scale pattern. Opening round ankle strengthened by addition of strip of felt. Draw-string preserved. Insect-eaten. Length 10", gr. width (flat) 7".

M. Tagh. a. 0046. Half of octagonal cylinder of white chalk-like stone, broken lengthways, pierced. Length $1\frac{1}{4}$", diam. $\frac{9}{16}$".

M. Tagh. a. 0047. Twigs and withered leaves of tree.

M. Tagh. a. I. 0047. Red-brown gum (?), now crumbling to powder. Found in Brāhmī manuscript bearing mark M. Tagh. a. I.

M. Tagh. a. III. 0061. Fr. of wooden document, broken each end; showing on *obv.* one line, on *rev.* several chars., possibly of Khar. Much effaced. 3" × $\frac{1}{2}$".

M. Tagh. a. IV. 00172. Cubical wooden die, marked in present-day fashion with small circles in ink. Cf. M. Tagh. i. 007; a. 0031; M. I. iii. 004. $\frac{1}{2}$" cube.

M. Tagh. a. IV. 00173. Wooden seal-case as M. Tagh. a. 0025. Roughly cut. 2" × $\frac{7}{8}$" × $\frac{3}{4}$".

M. Tagh. a. IV. 00174. Fr. of wooden writing-slip, end with seal cav., slip blank and cut short to point. $3\frac{1}{2}$" × $\frac{3}{4}$" × $\frac{1}{2}$" to $\frac{1}{8}$".

M. Tagh. a. IV. 00175. Wooden stay for well-bucket. See M. Tagh. b. 001 and Kha. ix. 0015. Length $3\frac{1}{2}$".

M. Tagh. a. IV. 00176. Wooden amulet (?). Flat oblong piece of wood with rounded ends. Groove cut in thickness, all round edge. Once covered with dark leather, of which plentiful remains are left on one side. String passed twice round in groove, and knotted with ends for attachment to necklace (?). Cf. L.A. III. i. 001. $2\frac{3}{8}$" × $1\frac{3}{8}$" × $\frac{3}{8}$".

M. Tagh. a. IV. 00177. Fr. of silk brocade, buff with pattern in dark green, pink, and prob. other colours now indistinguishable. Double cloth, woven in same fashion as M. I. viii. 0017, which it much resembles. Pattern too fragmentary for reconstruction, but seems to have consisted of elliptical cartouches perhaps containing birds, interspaced with lozenge-shaped spots. Cf. Ch. xlviii. 001. 4" × $2\frac{1}{2}$".

M. Tagh. a. IV. 00178. Wooden disc chipped round, and pierced with four holes ($\frac{1}{8}$" diam.), slightly burnished on convex side. Strainer (?). Diam. 1", thickness $\frac{3}{16}$".

M. Tagh. a. IV. 00179. Ring of white quartz (?). Outer diam. $1\frac{1}{4}$", inner diam. $\frac{7}{16}$", thickness $\frac{3}{8}$".

M. Tagh. a. IV. 00180. Irregular fr. of green stone, jade (?), similar to T. XIV. v. 007. Gr. M. $\frac{13}{16}$".

M. Tagh. a. IV. 00181. Brown woollen cord knotted throughout except for 2" at each end. Length 1' 9".

M. Tagh. a. IV. 00182. Small hollow ball of silver (?), irregular. Diam. $\frac{1}{2}$".

M. Tagh. a. IV. 00183. Fr. of bronze appliqué orn., crescent-shaped, with stud behind. Length $\frac{5}{8}$".

M. Tagh. a. IV. 00184. Fr. of crumpled leather stained black. $1\frac{1}{2}$" × $\frac{7}{8}$".

M. Tagh. a. IV. 00185. Berry; black, round. Pierced to serve as bead. Diam. $\frac{1}{2}$".

M. Tagh. a. IV. 00186. Fr. of bronze rivet-plate from buckle, as Kelpin. 0012. Elliptical with oblong slit. Orig. three pin-holes. Broken. $1\frac{3}{16}$" × $\frac{3}{4}$".

M. Tagh. a. IV. 00187. Bronze ring, corroded, round in section. Diam. $1\frac{1}{16}$" × 1", thickness $\frac{1}{16}$".

M. Tagh. a. IV. 00188. Fr. of buff woollen fabric, loose diagonal weave. Soft and worn. 9" × 4".

M. Tagh. b. 001. Wooden stay for well-bucket, as M. Tagh. a. IV. 00175. Cord knotted round centre attaching it to loop of stouter hemp rope. See Kha. ix. 0015. Length of stay $3\frac{3}{4}$", length of cord and loop 10".

M. Tagh. b. 003. Wooden comb; straight back with rounded corners. Almost intact. H. $2\frac{1}{4}$", width $2\frac{1}{2}$", length of teeth $1\frac{3}{8}$", thirteen teeth to 1".

M. Tagh. b. 004. Fr. of red woollen fabric. Much torn; diagonal weave. Gr. M. 1' 8".

M. Tagh. b. 005. Part of string net. Meshes *c.* 1" sq. Gr. M. 2' 2".

M. Tagh. b. 006. Iron knife, much corroded, set in wooden handle as Ka. I. 003. Length of whole $5\frac{1}{2}$", of handle $3\frac{1}{2}$"; width of blade *c.* $\frac{5}{8}$".

M. Tagh. b. 007–10. Three wooden arrow-shafts and pair of wooden pliers loosely tied together by two-strand cord.

007. Shaft has leaf-shaped sheet of bronze, painted black, inserted through end (split for the purpose) to take place of feathers. Arrow bound tight with grass fibre at each end of sheet to hold it tight and prevent further splitting. Sheet shown by position of cord-groove to be perpendicular during flight. Hole at other end of shaft retains iron tang of head. This end also bound with fibre. Both ends with binding painted black. Length $10\frac{3}{8}$", diam. $\frac{5}{16}$".

008. Arrow-shaft with deep cord-groove. Traces of three feathers. End for head broken. Length $16\frac{3}{8}''$, diam. $\frac{5}{16}''$.

009. Pair to 007. Metal sheet lost through loosening of end binding. Tang hole empty. Length $11\frac{1}{8}''$, diam. $\frac{1}{4}''$.

0010. Pliers. Stick with wide groove cut longitudinally down half its length so that flat sides can easily be pinched together. Handle end keeps bark and is decorated with incised rings. Length $3\frac{1}{2}''$, diam. $\frac{5}{16}''$. Pl. LI.

M. Tagh. b. 0012–14. Three wooden keys, for locks of type Kha. v. 006. Handles pierced for suspension; 0013 retains string, and has groove cut also round other end. There are respectively four, four, and seven pegs, of which 0012 retains two, and 0014 six. Hard and well preserved. $4'' \times 1'' \times c. \frac{1}{2}''$.

M. Tagh. b. 0015. Wooden tumbler-block for lock of type Kha. v. 006. Sides bevelled, but not ends. Five peg-holes; pegs all lost. Semicircular notch cut out of one side. $3\frac{5}{8}'' \times 1\frac{3}{8}'' \times \frac{5}{8}''$.

M. Tagh. b. 0016. Piece of dried hide, inside-out from skinning. Possibly of pig. $1' \times c. 8''$.

M. Tagh. b. 0017. Mass of loose string netting. Meshes about $\frac{1}{2}''$ sq. Much decayed. *C.* $1' \times 6''$.

M. Tagh. c. 001. Wooden writing-slip (?) with string-hole like M. Tagh. a. 006, but large. Ink traces on one side. $11\frac{1}{2}'' \times 1\frac{3}{8}'' \times \frac{3}{16}''$ to $\frac{1}{16}''$.

M. Tagh. c. 002. Pair of wooden eating-sticks (?), rounded on one side, flat on the other, tied together by string fastened to each in a groove cut near one end. Cf. M. Tagh. a. 0019. Length $7\frac{7}{8}''$, width $\frac{5}{16}''$, thickness $\frac{3}{16}''$. Length of string $1\frac{1}{8}''$.

M. Tagh. c. 003. Bronze rivet-plate, with pins behind each corner for attachment. Slit $\frac{1}{8}'' \times \frac{3}{16}''$ parallel to one edge. Prob. part of buckle, as Kelpin. 0012. $1\frac{1}{4}'' \times 1'' \times \frac{1}{8}''$.

M. Tagh. c. 004. Knob of soft white stucco. Cf. M. Tagh. 0029; a. 0032. H. $\frac{9}{16}''$, diam. $\frac{13}{16}''$.

M. Tagh. c. 005. Tapering wooden stick, on which were strung two Chin. coins. See Appendix *B*; also above, p. 1287. $4''$. Pl. LI.

M. Tagh. c. 006. Yellow-brown pebble, smooth, water-worn. Gr. M. $1\frac{1}{8}''$.

M. Tagh. c. 007. Piece of white quartz (?), ground to rude disc. Diam. $\frac{11}{16}''$, thickness $\frac{3}{8}''$.

M. Tagh. c. 008. Cone-shaped piece of horn hollowed to make a funnel. Groove cut round point. Cf. Kha. ix. 0021; but here there is no stopper. Depth $1''$, diam. $\frac{3}{4}''$ to $\frac{3}{8}''$.

M. Tagh. c. 009–11. Three wooden seal-cases. Cf. T. VIII. 5, type A; but instead of three sewn string grooves there is only one V-shaped notch in long sides. 009 and 0010 have hole through bottom; 009 is flat, sq.-cornered, and neatly bevelled at ends; well cut and preserved; 0010 and 0011 very roughly made and in bad condition, with much of sides broken away; 0010 almost cylindrical in section. *009*, $1\frac{3}{8}'' \times 1'' \times \frac{3}{8}''$; *0010*, $1\frac{7}{8}'' \times 1\frac{1}{4}'' \times \frac{7}{8}''$; *0011*, $1\frac{5}{8}'' \times 1'' \times \frac{5}{8}''$.

UIGUR AND SOGDIAN MANUSCRIPT FRAGMENTS FROM MAZĀR-TĀGH

M. Tagh. a. 0048. Fr. of Early Sogdian (?) MS., on soft light buff paper. Remains of 2 ll. writing, faint at one end. Remainder blank. $4\frac{3}{4}'' \times 2\frac{5}{8}''$.

M. Tagh. a. 0049. Scrap of Uigur (?) MS. on thin buff paper. Torn chars. only, belonging to 3 ll. Gr. M. $1\frac{1}{2}''$.

M. Tagh. a. IV. 00166. Fr. of Sogdian document. See below, Appendix *F*.

M. Tagh. c. I. 0071. Fr. of Uigur (?) MS. on soft buff paper. *Obv.* 7 ll. almost obliterated. *Rev.* blank. $6'' \times 3\frac{3}{8}''$.

OBJECTS SAID TO HAVE BEEN BROUGHT FROM MAZĀR-TĀGH

M. Tagh. 0024. Fr. of pottery from side of rounded vessel of soft red clay covered with creamy wash, with orn. scratched with a point, wavy band and cross hatching. Gr. M. $4\frac{3}{16}''$.

M. Tagh. 0026. a–k. Nine beads: (*a, b*) Disc-shaped and cylindrical, light green paste. Diam. $\frac{3}{16}''$. (*c, d*) Spherical, dark blue glass, translucent. Diam. $\frac{3}{16}''$. (*e, f*) Disc-shaped and spherical, black paste. Diam. $\frac{1}{4}''$. (*g*) Spherical, light blue glass, translucent. Diam. $\frac{1}{4}''$. (*h*) Spherical, white glass, translucent. Diam. $\frac{3}{16}''$. (*j*) Double disc-shaped, white glass covered with lustrous white paste. Length $\frac{1}{4}''$. Also (*k*) ring of bronze buckle, well preserved. Length $\frac{3}{4}''$.

Said to have been found near Mazār-tāgh (?); bought at Islāmābād.

M. Tagh. 0028. Pendant of white stone, flat lozenge-shaped, pierced at one end. $1\frac{1}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$.

M. Tagh. 0029. Dome-shaped lump of chalk-like stone, with hollowed top and flat narrow base. Diam. $\frac{1}{2}''$ to $\frac{1}{4}''$, H. $\frac{3}{8}''$.

M. Tagh. 0031. White glass bead, spherical, gilt inside. Diam. $\frac{1}{4}''$.

Section II.—THROUGH AK-SU AND UCH-TURFĀN

Delta of *Khotan-daryā.*

The eight marches by which I covered the 150 odd miles from Mazār-tāgh to the Tārīm, or Yārkand River, offered no opportunities for direct antiquarian observations. But as I passed down the steadily widening course of the Khotan-daryā, between the numerous branching beds which the river from below Korla-ayaki (Map No. 25. c. 4) has formed at different times and in turn deserted as they silted up, I had before my eyes the best possible illustration of what the ancient deltas of the Keriya River and the Kuruk-daryā in the Lop Desert must have looked like before they finally dried up.[1]

Route along *Ak-su R.*

On April 28 we crossed the Tārīm within a mile or so below the junction of the rivers of Yārkand and Ak-su. The former was almost dry at that season, whereas the latter filled a bed fully 300 yards wide and carried a considerable volume of water. The large size of the Ak-su River is explained by the great extent and relative nearness of the high snow-bed portions of the T'ien-shan main range which it drains. Its headwaters stretch for a length of over four degrees of longitude from the western slopes of the great peak of Khān-tengri to the Terek Pass north of Kāshgar. But with this abundance of water available for irrigation there contrasted in a very striking fashion the scanty and careless cultivation which is carried on in the narrow village belt along the river's left bank. I had ample opportunities to notice this on the three long marches which brought us to the 'New Town' of Ak-su, and the recollections still fresh of the thriving lands of Khotan necessarily deepened the impression.

Dolān population at Ak-su.

That this undeveloped condition of what might become a large and flourishing tract could not be due to an inadequate water-supply was here clear. In the end I was led to connect it with a marked difference in the ethnic character of the population. This consists in the riverine parts of the Ak-su district to a very large extent of settlers of genuine Turk extraction, known as 'Dolāns'. In speech, racial type, and original habits of life they appear to be closely allied to the Kirghiz who occupy the grazing-grounds in the adjacent parts of the T'ien-shan and are to be found also as cultivators in the valley of the Tushkan-daryā above Uch-Turfān. That the Dolāns who form the bulk of the population along the Yārkand River from above Marāl-bāshi to Ak-su are different in stock from the inhabitants of the oases to the south, east, and west is well known, and it is also certain that their conversion from semi-nomadic ways to settled agricultural life is of relatively recent date.[2] The wave of migration which brought them from across the true Turk territories north of the T'ien-shan into the Tārīm Basin is not likely to have been an old one. Yet, as we shall presently see, the geographical factors which facilitated the Dolān immigration may help also to explain certain historical observations about Ak-su.

[1] Among various instructive features it will suffice to mention one. On nearing the Tārīm there was striking confirmation of what I had repeated occasion to note before about the evidence afforded by lines of dead trees, or *kötek*, as to the direction which ancient beds, no longer otherwise traceable, must have followed. As we were striking across from the actual bed of the Khotan-daryā below Zil (Map No. 24. c. 4) to the north-west towards the Tārīm, I found an old bed of the former known as Ghaz-kum, though dry for many years past and further down completely choked by big dunes, still lined by living Toghraks growing on what were once its banks.

After passing about 11 miles from Camp 376 all trace of the old river-bed was lost. Yet, in the broad belt of bare drift-sand we had to cross further on, the lines of dead trees emerging between the dunes still kept the same direction from south-south-east to north-north-west as observed along the Ghaz-kum, until we had come within a few hundred yards of the belt of jungle lining the Yārkand River branch known as Körüklik-akin. There the trees were all living and ranged in rows invariably running from west to east and thus parallel to the river, the water of which accounted for their growth. The change of bearing was as sharp and sudden as if the alignment had been due to the hand of man.

[2] Cf. *Forsyth Mission Report*, pp. 54 sq.

Stay at P'an Ta-jên's head-quarters.

The main objects which had brought me to Ak-su were attained during my five days' stay at the 'New Town', the headquarters of P'an Ta-jên. In the course of this long-planned reunion I was able to thank that valued old Mandarin friend in person for all the effective help which, as Tao-t'ai of Ak-su, he had extended to me in his division, ever since I first entered it at Charkhlik, and far beyond its eastern limits, too. I could also satisfy his unfailing scholarly interest in the results of my labours by showing him specimens of my finds of ancient Chinese records, etc. At the same time P'an Ta-jên's powerful recommendation enabled me to assure all the local assistance which R. B. Lāl Singh needed for the continuous survey he was to carry through the outer T'ien-shan ranges as far as the passes north of Kāshgar. His friendly interest was secured also for Chiang Ssŭ-yeh, whose devoted services had helped so much towards the success of my efforts.

Ak-su the *Ku-mo* of Han Annals.

The inquiries made during my stay at Ak-su failed to produce any information pointing to the existence of old remains within the district. Nor do its early history and topography call for prolonged comments since the essential data available in the Chinese records have already been duly elucidated by MM. Chavannes and Grenard. It is the latter's merit to have first correctly demonstrated that the territory which in the Former Han Annals is described under the designation of *Ku-mo* 姑墨 and is mentioned by the same name also in the Later Han Annals and the *Wei lio* is identical with the present Ak-su.[3] The Former Han Annals' notice places it quite correctly to the west of Kuei-tzŭ, or Kuchā, at 670 li distance, and Khotan to the south 'at a distance of fifteen days' journey on horseback', the very number of marches which I counted between Khotan and Ak-su. The population of 3,500 families indicated seems to bear an approximately correct proportion to the 6,970 families recorded for Kuei-tzŭ (Kuchā) or the 4,000 given for Yen-ch'i, or Kara-shahr.[4] Of Wên-su 温宿, which the same notice puts 270 li to the west of Ku-mo, and which modern Chinese geographical texts and administrative nomenclature wrongly identify with Ak-su, MM. Grenard and Chavannes have shown that it corresponds to Uch-Turfān (Map No. 19. A. 4).[5]

Ak-su in T'ang times.

A passage of the T'ang Annals clearly indicates the identity of the Ku-mo of Han times with the 'little kingdom of Po-lu-chia' 跋祿迦 which Hsüan-tsang reached from Kuchā after having crossed a small desert for 600 li westwards.[6] Another passage of the *T'ang shu*, in recording a full itinerary from Kuchā westwards to Uch-Turfān (Wên-su) and beyond, mentions the town of Ak-su by the names of *Po-huan* 撥換 or *Wei-jung* 威戎 or *Ku-mo*, and correctly describes its position.[7] To this string of varying names for the same place must be added the form Chi-mo 亟墨, which the first passage of the *T'ang-shu* records as a variant, and the forms *Po-huan* 鉢浣 or *Pu-han* 怖汗, which Wu-k'ung mentions in addition to Wei-jung.[8] Hsüan-tsang's description of Po-lu-chia, which the T'ang Annals reproduce without adding more than the identity of the 'little kingdom' with Ku-mo, or Chi-mo, is brief. He states its extent as about 600 li from east to west by 300 li from north to south, and the size of its capital as 5 to 6 li in circuit. 'In general characteristics this country and its

[3] Cf. M. Grenard's observations fully quoted in M. Chavannes' note, *Les pays d'occident d'après le Wei lio*, *T'oung-pao*, 1905, pp. 553, note 1. For the Former Han Annals' notice, see Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. pp. 93 sq.; for the mention in the Later Han Annals, *T'oung-pao*, 1907, p. 208.

[4] Cf. *J. Anthrop. Inst.*, xi. pp. 94, 101.

[5] The maps Nos. 19, 23 show that here, too, the bearing and distance indicated are perfectly correct, the latter being about fifty-five miles by road measure from the 'Old Town' of Ak-su and the direction due west to the town of Uch-Turfān.

[6] Cf. Chavannes, *Turcs occid.*, p. 120; Julien, *Mémoires*, i. p. 10; Watters, *Yuan Chuang*, p. 64. The location of Po-lu-chia at Ak-su was correctly recognized already by V. de Saint-Martin; see *Mémoire analytique*, in Julien, *Mémoires*, ii. p. 265.

[7] Cf. Chavannes, *Turcs occid.*, p. 8.

[8] See Chavannes-Lévi, *L'itinéraire d'Ou-k'ong*, *J. Asiat.*, 1895, sept.-oct., p. 363.

Wu-k'ung travelled to Ak-su from Khotan about A. D. 787, on his way back to China. Obviously he had to make this great detour because the direct route via Lop and Tun-huang was blocked by the Tibetans.

people resembled Ch'iu-tzŭ (Kuchā) and its people, but the spoken language differed a little. The fine cloth and serge of the district were esteemed by the neighbouring countries. There were some tens of monasteries with above a thousand Brethren.'[9]

Position of Ak-su.

If we compare this short account of Ak-su with the detailed description which Hsüan-tsang devotes to Kuchā or Khotan, and its number of Buddhist monks with the five thousand he attributes to either of these kingdoms,[10] it is easy to realize that Ak-su was in his time a territory of far less importance and resources. With this accords what the Later Han Annals, the *Wei lio*, and the T'ang Annals indicate about the dependence of Ku-mo on Kuchā,[11] and the same observation still holds good at the present day. What importance Ak-su may claim nowadays as a commercial and administrative centre is due, not to its local produce or industries, far inferior to those of Kuchā, but mainly to the advantages which are assured to the district and its 'Old Town' by their geographical position. At Ak-su the great trade route through the northern oases of the Tārīm Basin from Kara-shahr to Kāshgar is crossed by others almost as important leading to the great fertile valleys north of the T'ien-shan. From Ak-su there leads due north the much-frequented route across the Muz-art Pass, which connects the Tārīm Basin with the Ili valley and the trade emporium of Kulja. Up the valley of the Tushkan-daryā and past Uch-Turfān lies the route which crosses the Bedel Pass and thence gives access, on the one side to the valleys around Lake Issik-kul, and on the other to the headwaters of the Yaxartes and to Farghāna, always amongst the lands most coveted by Central-Asian conquerors. The same factors which make Ak-su town nowadays a busy place of trade exchange and caravan traffic must have been equally at work in Han times when the great kingdom of the Wu-sun was established in the valleys northward, and later when all the mountains and the plains beyond were held by the Western Turks, whose paramount Khān Hsüan-tsang proceeded to visit near Tokmak after leaving Po-lu-chia, or Ak-su.[12] It is scarcely necessary to explain that the same geographical reasons must have always invested Ak-su with considerable strategic and political importance. There can be little doubt about their having primarily determined the selection of Ak-su as headquarters for the Tao-t'ai whom the Chinese established here with a (nominally) strong garrison after the reconquest of the New Dominion in 1877.[13]

Ethnography of Ak-su district.

The thought naturally suggests itself that geographical relations such as these could not have remained without their influence also upon the ethnography of the district. Exposure to inroads from the north may here, as in the parallel case of Kara-shahr, account both for the mixed character of the population and for the inadequate cultivation in spite of ample irrigation resources. But I lack the materials for following up this question here further. It must suffice to point out that the manifold changes in the name of the district to which I had occasion to call attention above may have, partly at least, had their origin in successive variations of the ethnic composition of the people.

[9] Cf. Watters, *Yuan Chwang*, i. p. 64; Julien, *Mémoires*, i. p. 10.

The reference to the 'fine cloth and serge of the district' is borne out by the fame which the woven rugs, horse-cloths, etc., of Ak-su still enjoy throughout the Tārīm Basin. They are manufactured mainly by the Kirghiz in the mountains, but the trade is centred in the 'Old Town' of Ak-su. For cotton goods carried from Ak-su to Kulja, see the Russian report of 1811 reproduced by Ritter, *Asien*, ii. p. 411.

[10] Cf. Julien, *Mémoires*, i. 4; ii. p. 224.

[11] See Chavannes, *T'oung-pao*, 1905, p. 554; *ib.*, 1906, pp. 226, 231, 233, 252, 256; *Turcs occid.*, p. 83, note 2.

[12] Cf. Chavannes, *Turcs occid.*, p. 264.

[13] It was then that the Yangi-shahr or 'New Town' of Ak-su was built as the Chinese headquarters and stronghold seven miles to the south of the 'Old Town'. Trade and traffic have remained at the latter. It is likely that the abundant water-supply of Ak-su and the consequent possibility of extending cultivation for the maintenance of a garrison were contributory reasons for the selection of Ak-su.

I may note here that on my way from the Tārīm I passed below Matan (Map No. 24. B. 3) the sadly neglected lands of what was to have been a 'military agricultural colony', apparently on the lines of the early Chinese model of Han times.

The present name Ak-su is obviously of Turkish derivation, and the earliest mention of it that I can trace does not go back beyond the fourteenth century.[14]

Start for Uch-Turfān.

On May 6 I left the 'New Town' of Ak-su in order to visit Uch-Turfān and the little-known tract of Kelpin in the outer hills of the T'ien-shan to the south. I knew that the Kelpin region had been but imperfectly surveyed, and information secured at Ak-su with P'an Ta-jên's kind help pointed to the existence of ruined sites near its small oasis and towards Marāl-bāshi. By visits to these I wished to conclude my archaeological labours in the field before returning via Yārkand to Khotan, where many tasks urgently called me. The seven-miles ride from the 'New' to the 'Old Town' of Ak-su took me along the edge of the wide barren plateau which rises with precipitous cliffs of loess from 60 to 100 feet above the two towns and the irrigated area adjoining them. Its top is covered with large cemeteries, Mazārs, and crumbling forts or 'Karauls', manifestly of late Muhammadan times. Of earlier remains, such as the presence of all the numerous modern shrines might have suggested, I saw none. Yet plenty of quasi-troglodyte dwellings and tombs showed what excellent sites for cave-temples these steep and easily worked walls of hard clay might have furnished.

T'ang itinerary from Ak-su to Uch-Turfān.

The two easy marches which brought me to the easternmost edge of the Uch-Turfān district lay across fertile and easily irrigated ground showing the same neglected cultivation I had observed on my way from the Tārīm. It was ascribed here to scarcity of population and inadequate labour. Both the river of Ak-su, or Kum-arik-daryā as it is known here, and the Tushkan-daryā which had to be crossed en route, carried a considerable volume of water, far larger than is to be found in the Khotan rivers at that season. The second, though filling then only a small portion of its flood-bed, fully three-quarters of a mile wide, was barely fordable.[15] MM. Grenard and Chavannes have already pointed out that these two rivers are correctly mentioned in the itinerary of the T'ang Annals where it describes the route from the town of Po-huan, i. e. Ak-su, to the town of Ta-shih 大石, or Wên-su 温肅, i. e. Uch-Turfān.[16] The first is named as the 'river of Po-huan', and the second as the 'river Hu-lu' 胡盧.[17] The distance of the first river from the town of Po-huan is not stated, but a distance of 40 li is indicated between it and the second river. This corresponds fairly closely to the 12 miles or so passed by the present road between the marsh-bed, marking an old western bed of the Kum-arik-daryā (Map No. 19. D. 4), and the village of Terek-bāgh at the crossing of the Tushkan-daryā (Map No. 19. C. 4). The 'town of Hsiao-shih' 小石, which the itinerary places half-way between the two rivers, may be looked for approximately near the present villages of Bārun and Chawarik.

A pleasant march on May 8 carried me from near the west bank of the Tushkan-daryā[18] to

[14] Cf. Elias-Ross, *Tārikh-i-Rashīdī*, pp. 7 sqq. Ḥājī Muḥammad, whose account Ramusio took down about 1550, also mentions Ak-su; see Yule-Cordier, *Cathay*, i. p. 293. His reference to the journey thence to Kāshgar lying through 'the wildest desert' is significant: it shows that either Uch-Turfān or Marāl-bāshi or possibly both were uninhabited at the time.

[15] In the Kum-arik-daryā, which feeds all the canals of the main oasis of Ak-su to the east of the Tushkan-daryā, I measured a volume of about 1,640 cubic feet per second, apart from the water caught in canals higher up. The Tushkan-daryā, then flowing in three main and three shallow channels, had a total volume of over 6,800 cubic feet per second. Later on in the season, when the melting of the great glaciers lining the western slopes of the Khān-tengri massif has begun, the volume of the Ak-su River, which they feed, is far greater than that of the Tushkan-daryā; see Hedin, *Reisen in Z.-A.*, p. 253.

[16] Cf. Chavannes, *Turcs occid.*, p. 9; *T'oung-pao*, 1905, p. 553, note 1.

[17] The itinerary mentions the 'river Hu-lu' as of the Yü-t'ien 于闐 territory; for *Yü-t'ien* must be read *Yü-chu* 于祝, the name of Uch-Turfān; see *T'oung-pao*, 1905, p. 553, note 1.

[18] This form of the river name is the one I heard from my local guides belonging to the settled population. The form *Taushkan-daryā* found in Russian maps and elsewhere may be the one used by the Kirghiz occupying the valley above Uch-Turfān.

Cultivation below Uch-Turfān.

the town of Uch-Turfān. The way led mainly through a belt of fairly old cultivation skirting the foot of a barren hill range to the south known as Kara-teke. The more careful appearance of the fields and the frequency of fine arbours were explained when I learned later from the scholarly Chinese magistrate at Uch-Turfān, P'êng Ta-jên, an old acquaintance, that the population in this tract was descended from colonists brought here from Kāshgar and Khotan in the time of the Emperor Ch'ien-lung after a rebellion which ended with the extermination of all previous settlers.[18a] That these were of Kirghiz or allied stock was suggested by a number of large domed tombs, or 'Gumbaz', in ruins which I passed near Sugetlik-mazār (Map No. 19. A. 4), and which local tradition vaguely ascribed to Kipchak princes.

Kirghiz settlements.

To the north, beyond the narrow belt of cultivated ground, there stretches a wide grassy plain which receives abundant moisture from the Tushkan-daryā, and which is bound to prove attractive as a winter grazing-ground for the Kirghiz. These form the great majority of the population higher up in the valley, where numbers of them appear to have taken to agriculture also. There were plenty of Kirghiz to be seen at Uch-Turfān itself, and having established my quarters at the country residence of their Bēg, outside the flourishing little town, I was able also to use my two days' stay for anthropometrical work among them.[19] Most appeared to retain still the characteristics of true Turk stock in their physical features.[20] But in others it was impossible to mistake evidence of intermixture with 'Sarts', as the Kirghiz here call the settled Muhammadan population. The use of this term, so common in Western Turkestān but heard by me here for the first time in the Tārim Basin, was apt to recall the close vicinity of the Russian frontier and the Sir-daryā headwaters.

Natural stronghold of Uch-Turfān.

The usual dust haze of the spring was hiding the view of the great snowy range of the T'ien-shan northward. It was thus impossible to obtain even a distant glimpse of the Bedel Pass, by which Hsüan-tsang had once gained the Issik-kul region and thence Sogdiana.[21] But even without that imposing background Uch-Turfān presented itself to me as the most picturesque and pleasant of any district headquarters I had visited in Chinese Turkestān. The view of the fertile green valley, set off vividly by the chain of barren grey hills which encircle the town from the south, was particularly striking from the height of the Chinese citadel (Fig. 337). This crowns the top of a precipitous rocky spur, which adjoins the west wall of the town and projects beyond it like a huge natural ravelin, rising with its westernmost cliffs to a height of some 250 feet. The citadel and the flanking defences joining it to the town walls are recent, having been built in the place of fortifications destroyed when Uch-Turfān was besieged and taken during the Muhammadan rebellion. But this natural stronghold is bound to have been utilized since early times.

Chinese notices of Uch-Turfān.

Its position may well be assumed to account for the name *Ta-shih ch'êng* 大石城 'the Big Stone Town', by which the itinerary of the T'ang Annals previously referred to mentions Uch-Turfān.[22] It adds: 'It is also called *Yü-chu* 于祝, or else the district town of *Wên-su* 温肅州.' As noted before, it is by the last name or its variant *Wên-su* 温宿 that the 'kingdom' and town are referred to in the Former Han Annals, the *Hou Han shu*, and the *Wei lio*.[23] The Former Han Annals ascribe to it a population of 2,200 families, which seems proportionate, and indicate its position quite correctly with reference to the Wu-sun capital which lay 610 li to the

[18a] *Forsyth Mission Report*, p. 42, gives the date as A.D. 1765.

[19] See the photograph, Fig. 333.

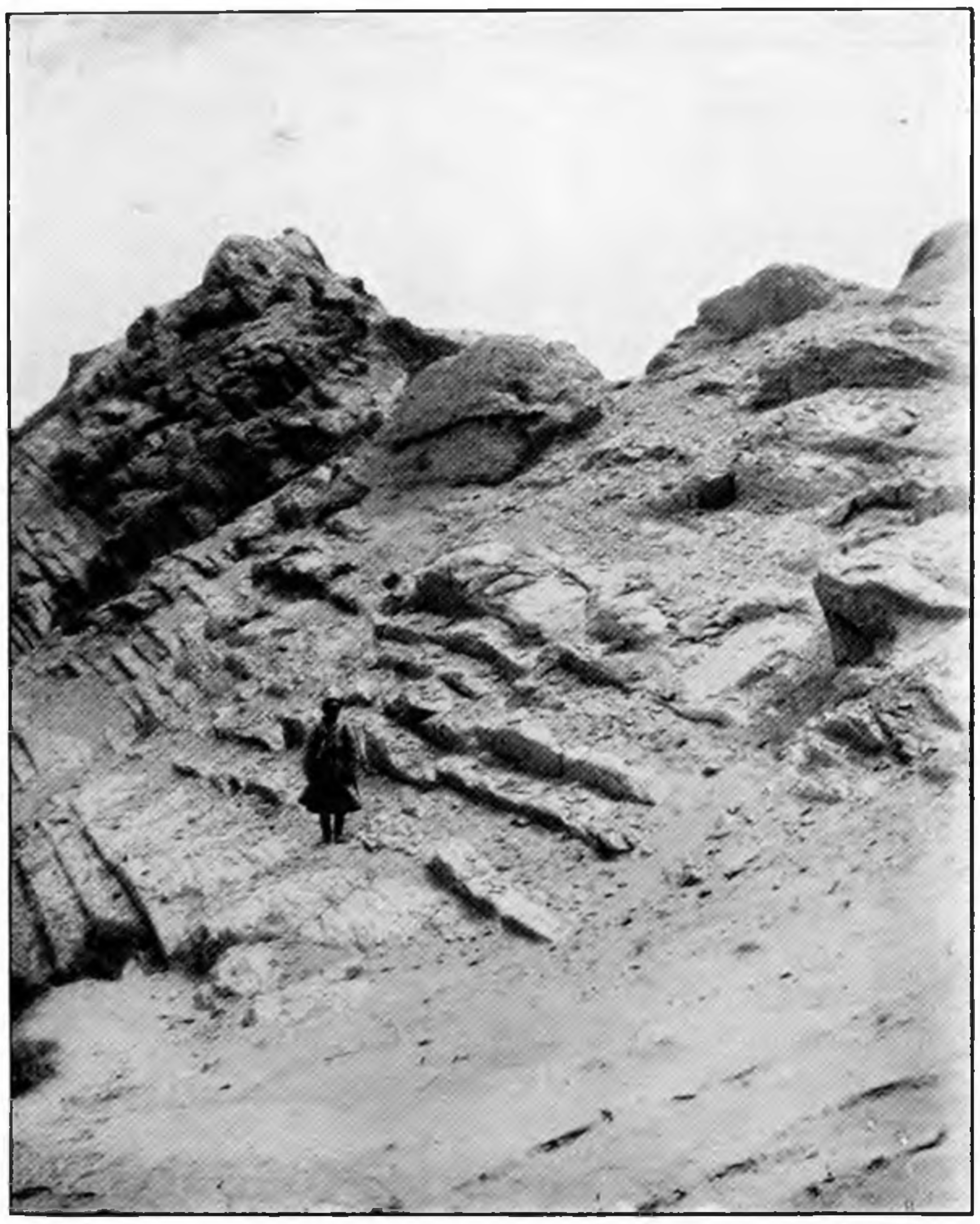
[20] Regarding these cf. Joyce, *J. Anthrop. Inst.*, xlii. pp. 453 sqq., 462; below, Appendix *C*.

[21] Cf. Julien, *Mémoires*, i. p. 11; Watters, *Yuan-Chwang*, i. p. 66. The Bedel Pass and not the Muz-art is clearly indicated by the recorded direction to the north-west of Po-lu-chia, or Ak-su; cf. Chavannes, *Turcs occid.*, p. 9. The Bedel Pass is undoubtedly meant by the *Po-ta-ling* mountain chain, the crossing of which the T'ang itinerary mentions on the route from Wên-su to the Issik-kul; see Chavannes, *loc. cit.*

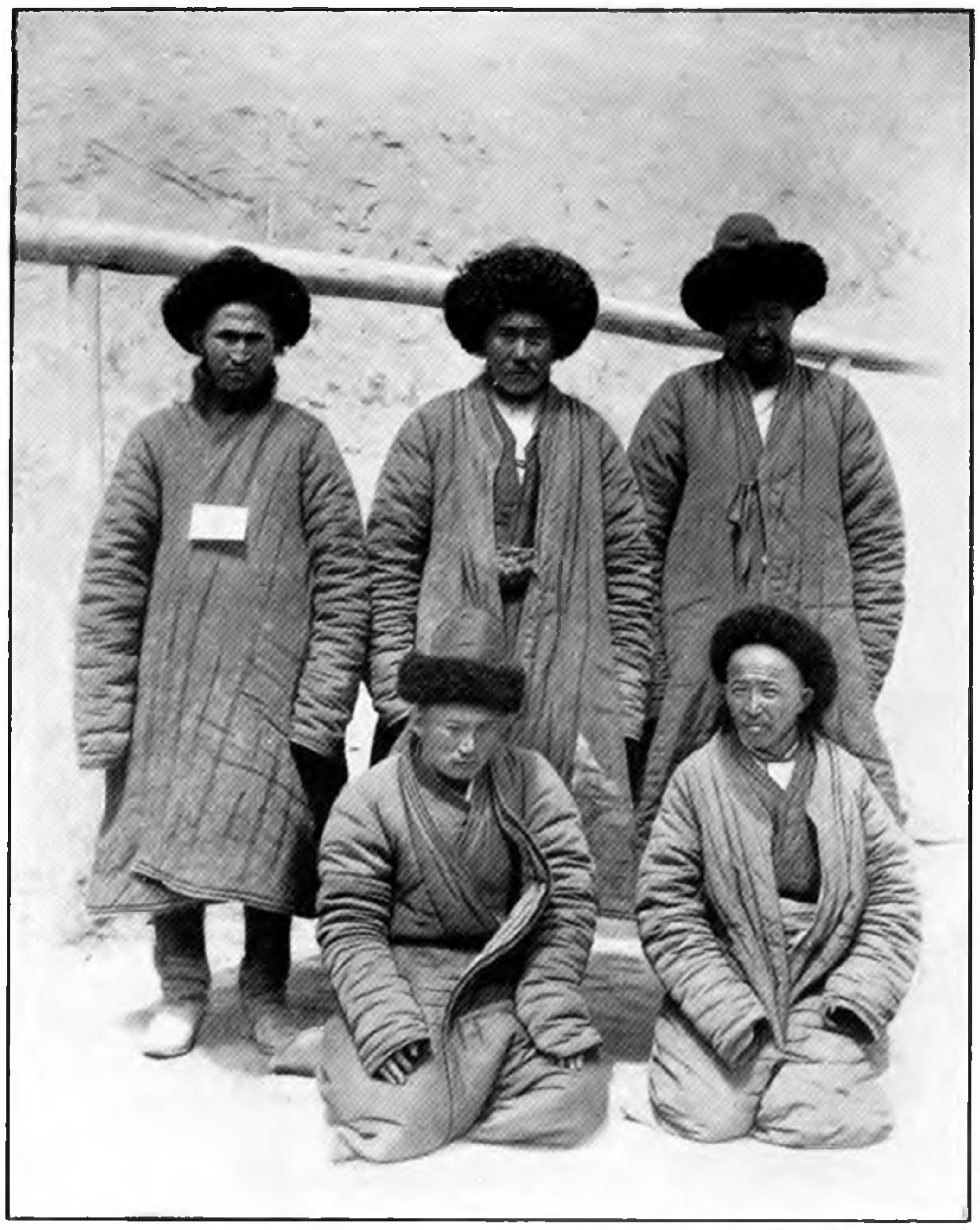
[22] See Chavannes, *Turcs occid.*, p. 9.

[23] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. p. 94; Chavannes, *T'oung-pao*, 1906, pp. 227, 231, 233, 252, 256; 1905, pp. 553 sq.

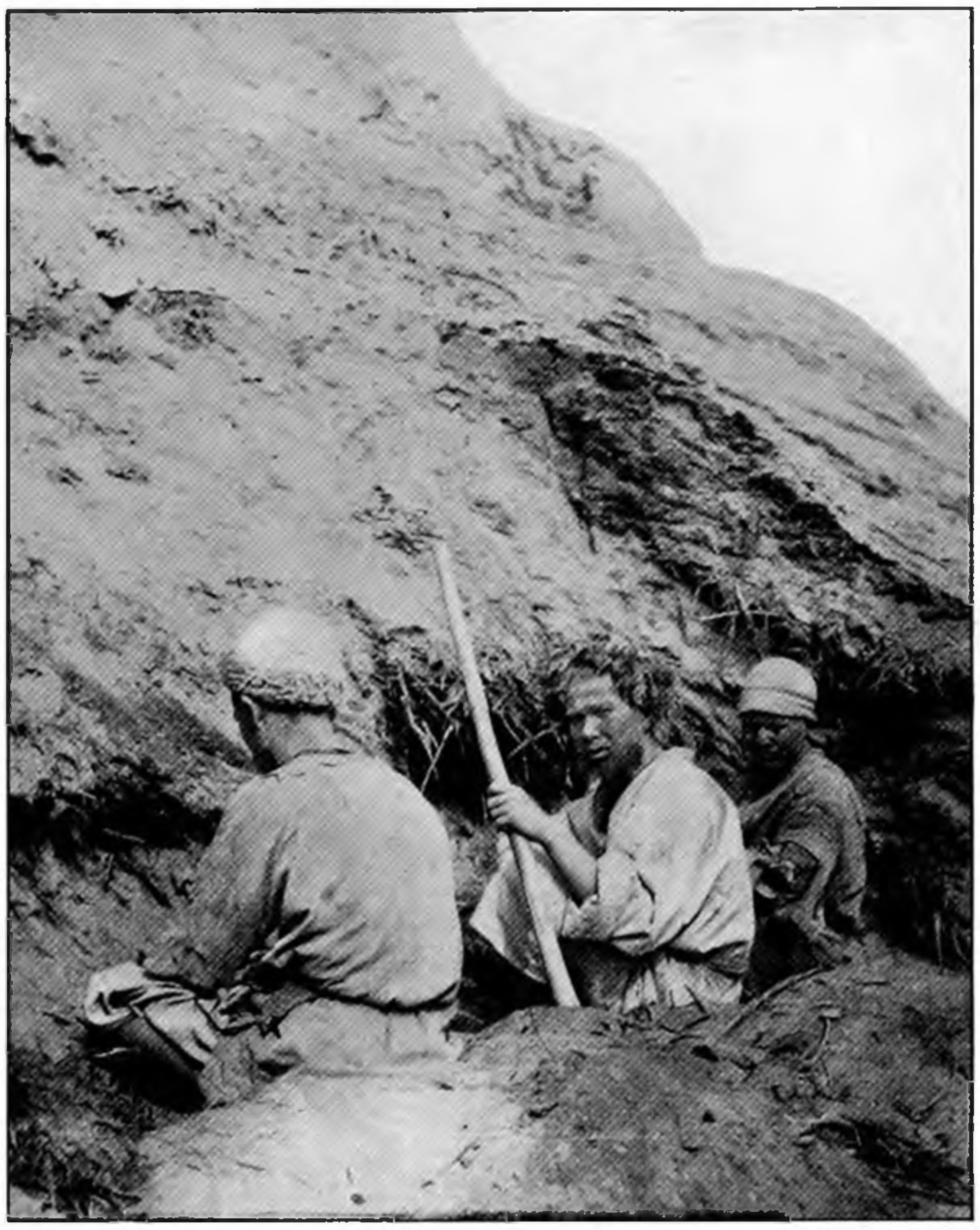
331. NORTH BASTION OF RUINED FORT, MAZAR-TĀGH, SEEN FROM OUTER COURT v.



332. REMAINS OF ANCIENT WATCH-TOWER ON ARACH HILL, NORTH-EAST OF MARĀL-BĀSHI.



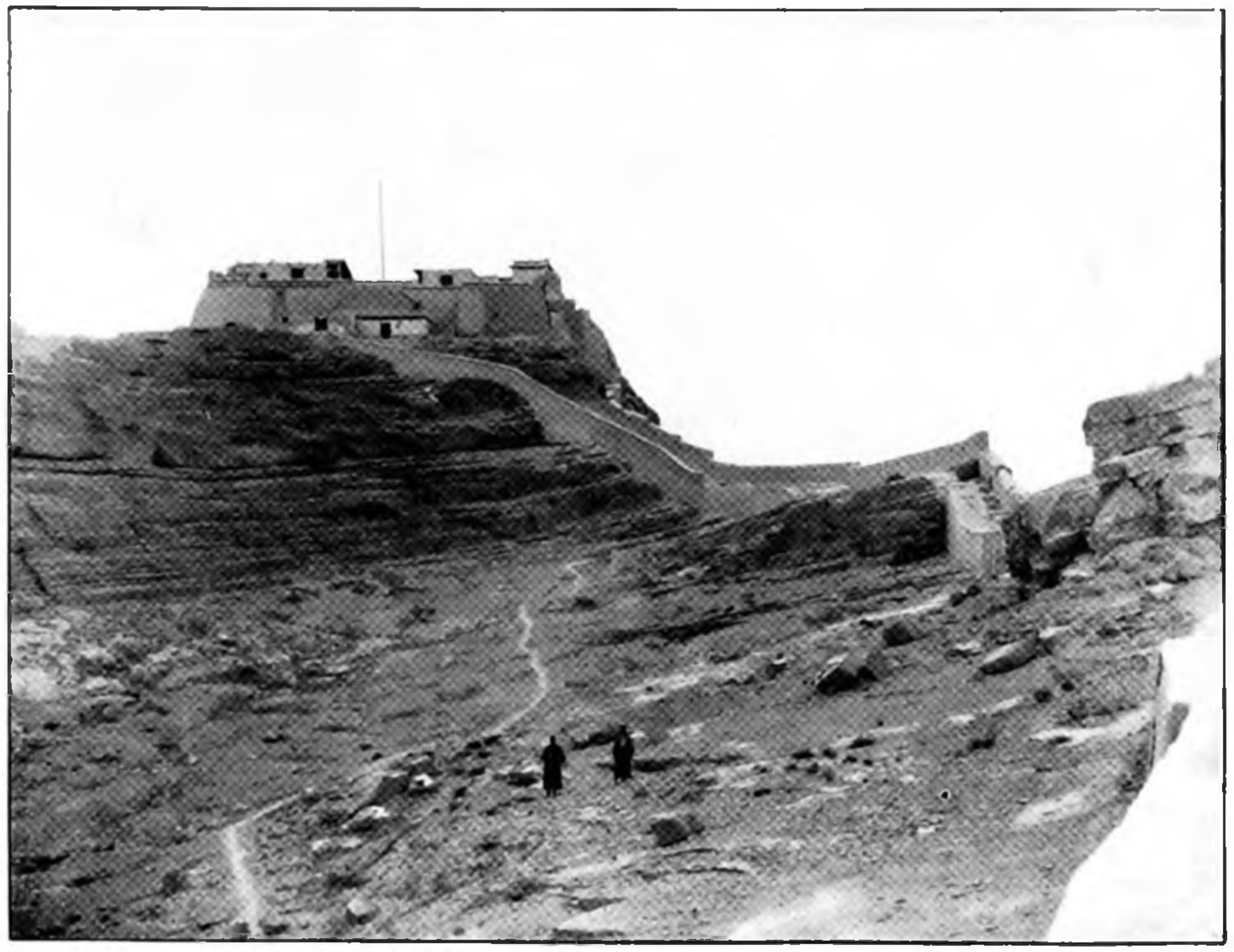
333. GROUP OF KIRGHIZ, ANTHROPOMETRICALLY EXAMINED AT UCH-TURFĀN.



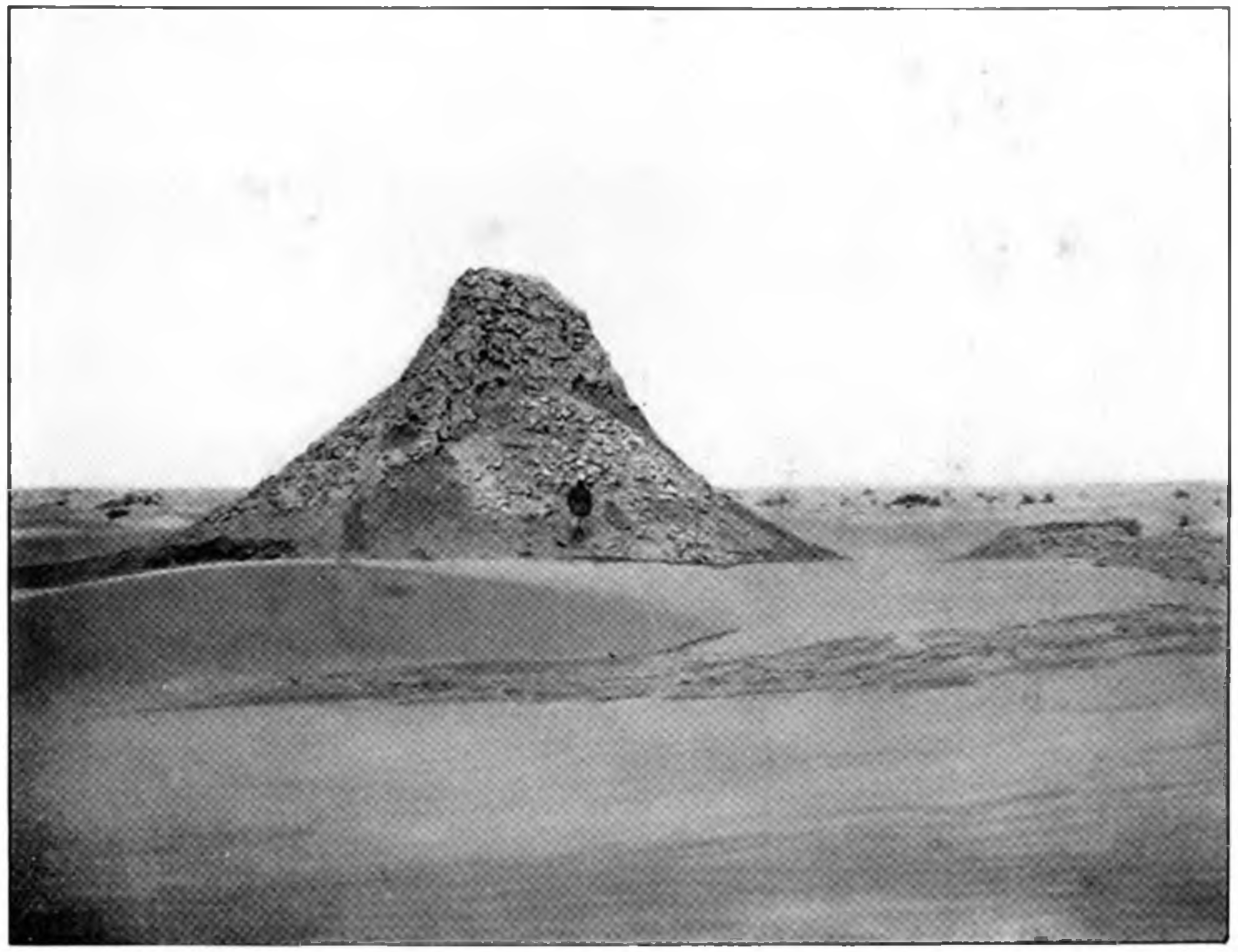
334. REFUSE LAYERS WITH ANCIENT RECORDS, ON N.E. SLOPE BELOW MAZĀR-TĀGH FORT, IN COURSE OF EXCAVATION.

335. MAZĀR-TĀGH HILL WITH RUINED FORT SEEN FROM NORTH-EAST.
Clay banks of Khotan River bed in foreground.

336. KĀKA-JĀDE PEAKS SEEN FROM NEAR MOINAK-KĀK KARA-TEKE RANGE.



337. CHINESE CITADEL CROWNING ROCKY SPUR ABOVE UCH-TURFĀN, SEEN FROM EAST.



338. RUINED WATCH-TOWER OF CHONG-TIM SITE, IN DESERT SOUTH OF KELPIN.

north,[24] to Ku-mo, or Ak-su, and to Wei-t'ou 尉頭, 300 li westwards. The latter place is mentioned by the Later Han Annals as on the road leading from Su-lê or Kāshgar north-eastwards to Wên-su, Ku-mo, and Kuchā,[25] and may be located with much probability about Akche on the upper Tushkan-daryā (Map No. 14. A. 2). This place is passed by the much-frequented summer route between Ak-su and Kāshgar, and the adjoining area shows now a good deal of Kirghiz cultivation.[26]

Section III.—THROUGH THE MOUNTAINS TO KELPIN

Stories about mysterious mountain castle.

The inquiries made during my stay at Uch-Turfān had failed to produce any information about old remains in the valley. But from villagers and Kirghiz alike I had heard vague stories about ruins of some mysterious town or castle, which was said to be sighted on clear days far away in the high mountains to the south, but to disappear whenever search for it was made. The statement that all those who had set out to seek the ruined town and to find its treasures had failed to discover it was enough to suggest that these stories were but the local reflex of that *Kötek-shahr*, *Shahr-i-barbar*, etc., which popular imagination is ever eagerly looking for in the desert near most oases round the Taklamakān. I was glad, all the same, when I found from what Akal-yolchi, an old hunter, told me that there would be a chance of following up this piece of local folk-lore on my way to Kelpin. Some ten years before, he with another Muhammadan had by the Amban's order accompanied a Chinaman, who was anxious to search for what he called 'the palace of the T'ang chief' and for some hidden inscription there, to the foot of certain peaks known as *Kāka-jāde* and rising above the Kelpin route. The Chinaman after a three days' absence in the mountains had come back without revealing the result of his quest. Akal-yolchi himself had climbed up later on, but he had found nothing except rocky crags and a grassy plateau beyond the crest of the range.

Kāka-jāde peaks sighted.

On May 11 I started from Uch-Turfān and after reaching the ruined watch-tower of Kong-tai (Map No. 14. E. 2) ascended an open and at first very barren valley to the south-west. The rugged range on our left rose higher and higher, and after a ride of over 20 miles there came into view on its crest-line a long array of very precipitous and fantastically serrated peaks, retaining small snow-beds in their gullies. These peaks, when viewed more closely from where the Kara-shilwe glens debouch into the widening valley, curiously recalled the Dolomites, and seemed to rise to heights over 13,000 feet. With their extremely bold pinnacles and almost vertical rock walls, they bore a striking resemblance to ruined towers and castles.[1] I found that the few Kirghiz who cling with their herds to any scanty grazing still to be found in the high valleys around, now almost waterless through progressive desiccation, knew the line of these peaks by the name of *Kāka-jāde* and regarded them with superstitious awe. As I saw them now towering above me with what looked like turrets, battlemented walls, and high mansions, I could not possibly feel in doubt that in the remarkable appearance of this part of the range lay the origin of the legends related at Uch-Turfān. From Mangush Bēg, the Kirghiz headman, who accompanied me as guide, I heard of dragons supposed to dwell among these peaks and to issue forth at times in the shape of clouds raining hail and fire. His and other Kirghiz stories vividly brought back to my mind the legends told by the old Chinese pilgrims of the dragons dwelling on the snowy heights of the Pāmīrs and

Dragons among peaks.

[24] Evidently near Kara-kul or Prjevalsk, at the eastern end of the Issik-kul.

[25] Cf. Chavannes, *T'oung-pao*, 1907, p. 207.

[26] The distance of about 70 miles between Uch-Turfān and Akche agrees well with the 300 li indicated by the Former Han Annals between Wên-su and Wei-t'ou. Safar-bai, which M. Grenard, *Mission Dutreuil de Rhins*, ii. p. 61, has suggested for the location of the latter place, is too near; see Map No. 14. C. 2. It is worth noting that Akche is the first place with agricultural resources which the traveller by this route reaches after leaving the Kāshgar district.

[1] Fig. 336 shows the Kāka-jāde peaks as seen in the distance from the elevated plateau near Moinak-kāk (Map No. 14. F. 2), to the south-east and on the other side of the range.

above the Hindukush passes.[2] This resemblance seems to bear striking proof to the tenacity with which ancient folk-lore clings to the mountains, in Central Asia too as elsewhere, notwithstanding all racial changes.[3]

Range crossed by *Saghiz-kan-art.*

I became still more interested in this range, so unlike any I had seen on my Central-Asian travels, when on arrival at Mangush Bēg's felt tents late that evening information reached me, elicited with some difficulty through my keen-witted camel-man Hasan Ākhūn, about the existence of a stone image to be found high up on the southern side of the range. Mangush Bēg somewhat reluctantly, as it seemed, admitted a knowledge of it and agreed to guide me to it. On the following day a short but fairly difficult march took us across the range by the pass called Saghiz-kan-art (Map No. 14. D. 2), at a height of about 8,600 feet above sea-level, and through the gloomy rock-bound cañon which forms the approach to it from the north. Some distance to the south of the pass a natural rock-cistern, known by the name of Shait-kāk, made it possible to fix camp. Thence I proceeded on May 13 under Mangush Bēg's guidance in search of the reported image. It proved a very interesting excursion, though its length and most of the ground were such that none but Kirghiz ponies could have covered it in one day.

Scarcity of water on range.

After climbing a succession of steep spurs along the south-east face of the range we found a small Kirghiz encampment below the highest of them, the Sar-bēl (about 10,000 feet above sea-level). Here, too, as everywhere in this range, the scarcity of water was striking. The Kirghiz were dependent solely on what scanty snow fell during the winter and remained on the ground for three or four months, to a depth of never more than a span. For the rest of the year water could be obtained only from 'Kāks', i. e. rock cisterns, and a few springs which issue below the small snow-beds to be found high up in sheltered ravines between those frowning peaks. An intelligent old Kirghiz whom I was able to examine at this camp asserted that in his youth rain and snow-fall had been somewhat ampler, and these poor alps used then to be visited by more Kirghiz and supported larger flocks than could subsist now on their stunted vegetation.

Fantastic forms of Kāka-jāde peaks.

From below Sar-bēl we rode along gradually widening uplands, skirting the foot of spurs which descend from the Kāka-jāde peaks sighted two days before (Fig. 336). Seen from this side, too, they presented a very fantastic appearance. There was a strange fascination in those towering rock pinnacles, and as many of them were manifestly unclimbable, it was easy to realize why old legends placed among them enchanted strongholds full of treasures. I much regretted that want of time did not permit of closer approach and of an attempt to ascertain the geological reasons for these peculiar rock formations. I may add that the exposed rock in the gorges on both sides of the range was mainly a reddish sandstone.

Stone image at Chalkoide Ziārat.

After a ride of over 10 miles from below Sarbēl we reached the grazing-ground of Chalkoide, at an elevation of *circ.* 6,700 feet, and there to my surprise I found a rustic 'Ziārat' occupying the top of a small rocky hillock. High above it on the crest-line of the range, the peaks of which overlook here a pass leading to the Idak-jilga (Map No. 14. E. 2), there stood out a particularly bold crag; in it pious Kirghiz eyes recognize the image of an ancient hero called Kaz-atā. But what arrested my attention much more was the discovery of a real stone image in the centre of the rough enclosure of unhewn stones, about 8 feet across, which marked the holy spot (Fig. 341). It proved to be a stēlē-shaped slab, 2 feet 10 inches high and $12\frac{1}{2}$ inches wide, rudely carved in flat relievo, and represented a male figure holding a curved sword with the hands crossed over the breast. The head was disproportionately large; the feet were not recognizable. The eyes and

[2] Cf. Legge, *Travels of Fâ-hien*, p. 24; Julien, *Mémoires*, ii. p. 206; Chavannes, *Voyage de Song Yun*, p. 28.

[3] For exactly corresponding legends which Kashmir tradition from early times has attached to the Nāgas dwelling in mountain springs and lakes, cf. *Rājataraṅgiṇī*, transl. Stein, i. 263–5, note.

eyebrows bore traces of black paint. The carving, though too rude for any safe dating, was manifestly old, the stone showing a great deal of weathering.

Stone taken for miniature Stūpa.

That the image, whatever it may have been intended to represent, had been an object of pre-Muhammadan cult seemed likely *a priori*. This was made still more probable by the discovery at its side of what manifestly was to be taken for a miniature representation of a Stūpa (Fig. 341 on right). The block of stone, 14 inches in height, showed on two faces what looked like a double base of approximately square shape and, above a receding moulding, a roughly rounded top, suggesting a rudimentary dome. The material of the stone seemed to me granite. The back of the stone was flat. At the time I took it for a rough carving meant to show a Stūpa as it were in relievo. But a subsequent observation, made seven years later and far away near the Pāmīrs, has suggested to me that the peculiar shape of this stone was natural and due to erosive action. At a much-frequented Mazār near Namadgut in Russian Wakhān, and facing the ancient fortress of Kala-i-Ka'ka on the Oxus, I found collected a series of exactly corresponding stone blocks, differing in sizes but all showing the same curious resemblance to miniature Stūpas. They were clearly of natural origin, but had obviously been placed at the shrine out of lingering respect for their shape. This, while Buddhism still prevailed along the uppermost Oxus, would certainly have made them objects of worship at *svayambhū* Stūpas.[4]

Local worship of image.

The most curious feature to me, however, at this strange 'Ziārat' of Chalkoide was the enclosure around filled with the usual votive offerings of orthodox Muhammadan shrines in these parts, horns of *Ovis Poli* or *Ovis Ammon* and wild goats, horse-skulls, rags fastened on staffs, etc. There could be no doubt that worship at this shrine was very much a thing of the present, in spite of the Uch-Turfān Mullahs' protest against it, of which Mangush Bēg told me. Until recent years the cult of this queer 'Ziārat', he declared, was general among the Kirghiz of the neighbouring grazing-grounds. Numbers of men used to come to it also from distant valleys, good Muhammadans as all these Kirghiz herdsmen have been for long generations. It was said that at the present day only the older men clung to the custom of praying at the shrine; but even thus nobody dares to enter the enclosure. Curiously enough the carved figure was stated by Mangush Bēg to represent a female, Kuwaghiz by name, the wife of that ancient hero Kaz-atā, whose image is supposed to be represented by the conspicuous rock pinnacle already referred to. A confused tradition, the details of which I could not unravel, connects the two images. The nexus, however obscure, suffices to show that the curious shrine here surviving must have owed its origin to that worship of a striking natural feature, i.e. a *svayambhū tīrtha*, to use the Sanskrit terminology, which is so well known from the folk-lore of India, ancient and modern, and for which Buddhist local cult has always been ready to find room.

Advance of aridity in mountains.

This interesting excursion from Shait-kāk and the next two days' marches to Kelpin served to acquaint me with the very arid conditions prevailing in these outer T'ien-shan ranges notwithstanding their relatively great height. In the absence of records or datable remains of any antiquity, it is impossible to trace here the changes which the climate may have undergone during the historical period, though Kirghiz tradition seems distinctly to point towards progress of 'desiccation' in recent times. But, even without any definite data on this point, the study of the present conditions in these hills, where springs are now extremely rare and all travel depends on an exact knowledge of the water-supply obtainable from natural cisterns (*kāk*) and varying in different seasons, was to me of historical interest; for they make it easier to realize conditions such as are likely to have prevailed in the now absolutely waterless desert ranges of the westernmost Pei-shan during the period when

[4] Regarding early and modern worship of 'svayambhū' images in India, cf. *Rājatar.*, transl. Stein, i. 113; ii. 136, etc.

bands of Hun raiders could still make their way through them from the Hāmi side towards the great Chinese route west of Tun-huang, and when the Chinese opened their 'new Northern route' across those barren hills to Turfān and Guchen.[5] It was instructive to find that Kirghiz raids of a corresponding character, made from the high T'ien-shan valleys upon the caravan road in the plains connecting Ak-su with Kāshgar, are still within living recollection both at Kelpin and Marāl-bāshi. I have little doubt that they could yet be revived in practice if the hold of the Chinese administration or of the power northward were relaxed.

Through the Kōrum-boguz gorge.

The route which was followed from Shait-kāk down to Kelpin lay all the way through deep-cut picturesque gorges. Their precipitous walls of sandstone and gneiss, rising in places to heights of well over a thousand feet, bore striking evidence to the erosive force of the floods which had cut through them in past ages. Yet only in the Kōrum-boguz gorge (Map No. 14. D. 3) was a tiny stream met with, and this, too, disappeared soon in rubble beds after watering some twenty acres of wheat-fields at the little 'Terelgha' of Terek-ābād cultivated from the Kelpin oasis. Below this point the river-bed, completely dry at the time, cuts through the wall-like hill range overlooking the broad open valley of Kelpin from the north. Then by an imposing rock-gate it debouches on to a huge gravel glacis stretching down towards the oasis. Instead of taking the more direct track to the latter, which strikes off at Terek-ābād by a side valley to the south-west, I followed the steadily widening dry flood-bed down to Sairam-mazār (Map No. 14. E. 3), where its subsoil drainage gives rise to a lively spring. A Ziārat sacred to Sultān Owraz-atā in a fine shady arbour marks this modest 'Su-bāshi'. Whatever drainage is else carried down to this huge alluvial fan does not come to light until some 15 miles lower at Bulak-bāshi. There the flood-bed just described meets the dry river-bed coming from Kelpin, and from the marshy springs rising near their junction there forms a stream which carries its water to Achal and as far as the station of Chilan on the present Ak-su–Kāshgar high road.

Oasis of Kelpin.

The oasis of Kelpin (Map No. 14. D. 4), which I reached on May 15, proved to be a very pleasant and instructive place, notwithstanding the poor reputation enjoyed by its people, whom current belief at Ak-su and elsewhere has long represented as thieves and robbers. Perhaps in the old days, when Kelpin may have served as a convenient base for Kirghiz raids upon the traffic of the high road south or for the disposal of spoils, the reputation was not altogether undeserved. Now the oasis presented a picture of intensive cultivation and relatively high rural comfort such as I had seen nowhere surpassed within the Tārīm Basin. Far off from all main routes and thrown upon their own resources through the distances which separate Kelpin from the nearest markets, its people seemed to have escaped most of the changes brought about by Chinese and other foreign influences.[6] Isolation forced them at the same time to make the best possible use of traditional methods. The utter barrenness of the hill ranges and bare gravel 'Sais' which surround the long but narrow strips of cultivation on all sides made the result still more striking.

Extension of cultivated area.

Of fertile loess soil adjoining the old village lands there was plenty to be seen to the west, south, and north. But the water available for irrigation is so limited that the new fields opened to meet the needs of a rapidly increasing population can be tilled only in turns of three or four years. From reliable local information it was clear that since the establishment of settled conditions, which followed the Chinese reconquest, the population of the twelve *oimaks* or hamlets into which Kelpin is traditionally divided had steadily increased, the total at the time being estimated at about two thousand homesteads. Yet according to the uniform statement of Kāsim Bēg, the intelligent local

[5] See above, pp. 705 sqq.

[6] For a group of some of the Kelpin people whom I examined anthropometrically, see Fig. 342. They show a striking absence of all Kirghiz features.

head, and of the old villagers I examined, there had been no change in the water-supply in their time, nor was any remembered by tradition. So it was clear in this case that any *yangi-yer*, or new land, that has been opened since Yāqūb Bēg's times—and its extent as ascertained by me in the course of my survey is considerable—was the result solely of increased pressure of population and not of a change in climatic conditions.

No change in Kelpin irrigation resources.

The evidence thus furnished by Kelpin has its obvious importance in dealing with questions concerning 'desiccation' or climatic oscillations in the Tārīm Basin and with the arguments for the latter which may be derived from archaeological observations at abandoned sites, etc. It demonstrates once again the need of caution in accepting the fact of extended cultivation in the past as a definite proof for more abundant water, i. e. a moister climate. This evidence deserves all the more attention because the question as to the conditions affecting Kelpin irrigation is singularly free from such complications as we have noted in the case of the oases of the Domoko tract,[7] or as must necessarily arise at oases dependent for their water-supply upon rivers the beds of which are liable to silt up and shift. The whole of the Kelpin water is furnished by springs which rise in a deep-cut gorge at a point known as Su-bāshi and about 10 miles from the centre of the oasis. This gorge resembles in character that of Kōrum-boguz, and debouches into the valley plain from the north-west through the narrow defile of Chong-karaul.[8] It was interesting to note that in spite of this limitation of the water-supply and the steady rise of the population, which the irrigable land could no longer suffice to maintain, permanent emigration was unknown. Even Ak-su and Korla, with their abundance of water and arable land, could not tempt the men of Kelpin to extend the seasonal visits which many of them were accustomed to pay as labourers to these and other northern oases.

Ruined sites adjoining oasis.

In view of what has just been explained about the source of Kelpin irrigation it did not surprise me to find the reported ruins in the immediate vicinity of, or rather within, the present cultivation limits. *Sayāt-shahri* proved to be a small oblong circumvallation situated to the west of a deep-cut flood-bed known as Kuchak-yāri and surrounded on the other sides by new fields irrigated in rotation. The poorly built clay walls of the enclosure form a rectangle of about 166 yards by 90 and rise in places from 6 to 10 feet. Their thickness appears to have been about 6 feet; a weak parapet, about $1\frac{1}{2}$ feet thick, crowned them at a height of *circ.* 6 feet above the present ground-level. No structural remains could be traced within apart from a completely decayed low earth mound; outside the south-west corner were seen the low clay walls of two adjoining enclosures measuring about 50 yards by 25, but they furnished no indication of their original character. No finds of any sort were reported at this small site, and, as occasional flooding from canals prevents wind-erosion, not even pottery débris could be traced on the surface. Hence the date of this small fortification remained quite uncertain. The same was the case also at the site of Munjakche, a small débris area only about a mile to the south of the little Bāzār of Kelpin, most of which had been recently laid out into fields. I noticed here only scanty potsherds and a shapeless clay mound about 15 feet high, partly dug into for manuring earth. Years before small stone ornaments were said to have been picked up near by.

These remains at Kelpin itself having proved of no archaeological profit, I was all the more pleased with the lucky chance which caused my visit to coincide with the return of a party of

[7] See above, pp. 202 sqq.

[8] The name is derived from a ruined watch-post (*karaul*) which with its flanking walls forms a *chiusa* across the mouth of the defile. Want of time prevented me from visiting it. But local information asserted its relatively modern origin, and this was confirmed by the statement of the local Chinese subdivisional officer who had found the construction of this 卡子 *ch'ia-tzŭ* in the Emperor Ch'ien-lung's time mentioned in a Chinese descriptive account of the 'New Dominion'.

Antiques acquired at Kelpin.

Kelpin men who had just searched extensive débris areas of the 'Tati' type in the wide belt of absolute desert between the arid outer hill chain of Kelpin and Tumshuk on the Ak-su–Kāshgar road. As with the 'Taklamakānchis' of Khotan, it was the spring season which had led them to indulge in this treasure-hunt after a succession of 'Burāns' had shifted the drift-sand and laid previously hidden patches of hard soil bare. Of finds of small objects in precious metal and the like, such as occasionally reward these 'treasure-seeking' expeditions, the men had nothing to tell. But the numerous copper coins which I acquired from them ranged from Han to T'ang times and left no doubt about the antiquity of the settlements once occupying the area they had searched.[9] Further evidence of this was to be found in the character of the small objects of stone, metal, glass, and paste which they had brought away, as described in the List at the end of section iv. Among them it will suffice to mention the intaglio seal in cornelian, Kelpin. 003 (Plate V), with a poorly worked female bust; the intaglio bronze-seals, Kelpin. 004–6 (Plate V), badly worn but showing the influence of classical models; the open-work bronze pendants, Kelpin. 0014. a–c (Plate VI), in the form of dancing men, and paste beads of the *millefiori* type, Kelpin. 009. a (Plate VI), 0010. a, b (Plate IV). The technique of the last calls for investigation. Another set of similar small objects in metal and stone which were subsequently brought to me at Kelpin as having been found on desert ground south of the Kudughun hill (Map No. 14. D. 5) came in all probability from the same débris area. Three bronze seals from among them, Kud. 006–8, are reproduced in Plate VI and include a satyr head in relief, recalling the grotesque heads in Khotan terra-cotta appliqués.

Section IV.—DESERT SITES NORTH OF TUMSHUK AND MARĀL-BĀSHI

Move into desert south of Kelpin.

On May 17 I set out from Kelpin with a party of 'treasure-seekers' and labourers for the old sites in the desert on the south. The heat of the season, already far advanced, and the difficulty of carrying an adequate supply of water—my brave camels had to be spared all work after Ak-su and were no longer available for transport—made the three days' exploration somewhat trying. On the first day we were obliged to make a long detour skirting the eastern extremity of the outer hill chain of Kelpin, which owing to the very rugged nature of its barren ridges could not be crossed with laden animals. When turning the end of the range not far from Achal, the outlying colony of Kelpin already mentioned, I sighted far away to the south-east a high mound known as the 'Tim' of *Soksuk-shahri*. It was impossible to visit it from the route for which we were bound. But the Kelpin men talked of it as a very ancient tower, and let fall the shrewd guess that it might have stood on the line of an old road leading from Ak-su towards Kāshgar.

Ruined site of *Chong-tim*.

We camped at the foot of the range near the debouchure of a narrow gorge, in which was said to lie higher up a *kāk*, or rock-cistern, occasionally holding water. Next morning we left the desert track which leads on towards Marāl-bāshi past the foot of the conspicuous Kudughun Peak, and struck to the south-south-west. The bare clayey glacis of the hill chain gave way first to ground covered with scanty tamarisk-cones and drift-sand, and further on to bare dunes rising up 10 feet or so. After covering close on 14 miles, we arrived at the ruined site of which my Kelpin guides had spoken as *Chong-tim*, 'the big tower'. About half a mile before reaching it, all the ground left bare between the dunes became thickly covered with potsherds, slag, and similar 'Tati' débris, and this soon proved to extend over an area of more than two square miles. Towards its northern end, and surrounded by dead tamarisk-cones and dunes reaching to 15 feet or so in height, there rose the tower which has given the site its name; adjoining on the west was a square and approximately orientated

[9] See Appendix *B*, below. One of these coins, of T'ang type, shows four non-Chinese characters which have not been read as yet; see Pl. CXLI, No. 25.

circumvallation (Fig. 338). The clay rampart enclosing it measured about 110 yards on each face, and still rose on the west side, where it was best preserved, about 12 feet above the nearest bare ground. But the close approach of dunes on all sides made it difficult to ascertain the original ground-level. The rampart, badly broken as it was in most places by wind-erosion, yet showed that its stamped clay was strengthened by layers of brushwood. The watch-tower, though much decayed too, stood to a height of about 35 feet from what seemed the ground-level, as marked by the eastern rampart. From measurements at the east face of the tower, where its foot was less encumbered by débris than elsewhere, the base appears to have been about 25 feet square. The tower was built of sun-dried bricks measuring either 11″ × 10″ × 3″ or 14″ × 8″ × 4″. The masonry looked rough, with layers of mud plaster but no brushwood or the like between the courses.

Evidence of coins and other relics. The general appearance of these remains and of the eroded ground all round left no doubt about the antiquity of the ruined fort, and the finds of small objects in its immediate vicinity fully confirmed this. Just outside the north face of the enclosure there were picked up eleven much-worn *Wu-chu* and 'goose-eye' coins lying close together, evidently as they had dropped from a string. Among other Chinese coins found near the circumvallation three are *Wu-chu* pieces and one a T'ang coin with the legend *K'ai-yüan*. Their evidence, indicating occupation from an early period down to T'ang times, was supported by that of the coins which were brought to me at Kelpin, avowedly as having been found at the Chong-tim site on the 'treasure-seekers'' latest visit. Of these, twelve were T'ang pieces, the latest bearing the *nien-hao* Ta-li (A. D. 766–80), and one a *Huo-ch'üan* coin of Wang Mang (A. D. 14–19).[1] The pottery fragments which lay thickly on all patches of eroded ground about the ruined fort were mostly of fine red clay and, as seen from the specimens described in the List below, bore a distinctly old look. One piece, Chong-tim. 002, with mottled green glaze, is considered by Mr. Hobson to be of Chinese Han type; another, Chong-tim. 005, with floral ornament in low relief under green glaze, is held to be akin to Near-Eastern, probably Persian, ware dating from the second to the ninth century A. D. Among the miscellaneous small relics in bronze, glass, paste, and wood (Chong-tim. 006–47) picked up at the site there is none that would necessitate a lower chronological limit for the abandonment of the site than that of late T'ang times.

Refuse-heaps within ruined station. Within the circumvallation no structural remains of any sort survived. But inside the west rampart there stretched refuse-heaps, from 3 to 4 feet high, for a distance of some 25 yards. These I had completely cleared to the ground, but their yield was very scanty. Within the masses of horse and cattle dung, straw, and brushwood, there turned up only a few rags of cotton fabrics (Chong-tim. 0049. a, b), bits of felt, rope, and the like. I may note that not a single piece of paper was unearthed. It was, however, significant to find numerous small pieces of sulphur scattered at different points of the enclosure. They furnish conclusive proof that the sulphur mine on the eastern slope of the Kudughun Peak (Map No. 14. D. 5), which is now regularly worked by Kelpin people, or some similar deposit in the hills northward was already being exploited during the occupation of the little fort. Its character, and particularly the high and solid watch-tower, seemed to point distinctly to the ruin being that of a station on an ancient route line leading from Ak-su to Kāshgar. It appears only natural that such a roadside station, lying within 10 miles or so of the sulphur mine in a straight line, should have formed a regular place of transit for its products.

Line of ancient route. I may explain here at once that the Chong-tim site has proved to be situated on the most direct line connecting Chilan, where the present road from Ak-su leaves the foot of the hills, with what my explorations of October, 1913, have shown to be its ancient continuation leading north of Marāl-bāshi and along the foot of the mountains to Kāshgar. It would be impossible here to give the reasons upon which this statement is based without fully discussing the results of my topographical

[1] Cf. Appendix *B* for all numismatic details.

and archaeological surveys of 1913, and these must necessarily await publication in the report on my third journey and in the detailed maps which are being prepared for their illustration. Meanwhile it must suffice to point out that this ancient route line kept throughout to the north of the present Marāl-bāshi–Kāshgar road and well away from the ground liable to floods from the Kāshgar River. The ruined site at the foot of the desert hill of Lāl-tāgh (Map No. 14. c. 5), to be referred to below, probably represents the stage on it which lay nearest to Chong-tim on the south-west. In the opposite direction the line of the ancient route is likely to be marked by the 'Tim' of Soksuk-shahri to the north-west of Chong-tim. Between the latter site and Soksuk-shahri my Kelpin guides declared that they knew amidst the dunes two much-decayed mounds which they took for P'ao-t'ais, and which they were ready to show me, had the difficulty about water allowed a prolonged stay in the desert at this season. No 'Tati' débris or other remains were reported near them.

Ancient agricultural settlement.

That Chong-tim marked the site not merely of a roadside station but also of a settlement of some size became evident on a closer inspection of the neighbouring ground. Everywhere to the south and south-east for a distance of over a mile there rose erosion terraces, usually about 8 to 10 feet in height, thickly covered with potsherds and obviously marking the position of completely destroyed dwellings. At one point such a clay 'witness' still retained remains of large bricks 10″ x 10″ x 6″, evidently from the foundations of a structure of some size. Here the 'treasure-seekers' of Kelpin had been recently at work, and had in the course of their burrowing brought to light a large earthen jar. To their disappointment, instead of the hoped-for treasure, it proved to contain only a coagulated oily substance. Of the latter enough still adhered to the broken bottom to secure a specimen. In several places I came upon the raised lines of small water channels, all running from south-west to north-east. A reference to the map shows that the canal feeding them must have come from the direction of Tumshuk and probably from a branch of the dying Kāshgar River, perhaps the same of which the end is now marked by the dry bed known as Gōre-akin (Map No. 14. D. 5). Elsewhere trunks of dead fruit-trees could be seen lying on the ground, still showing the lines on which they were planted in the ancient orchards.

Relics of modern fighting.

In view of the abundant and clear evidence proving the early abandonment of the site, I felt much puzzled when three Chinese copper coins of quite modern issues were picked up close together a short distance to the south-east of the ruined fort. Two were coins of the Emperor Ch'ien-lung with a mint-mark later than A. D. 1759, the other a piece of Chia-ch'ing (A. D. 1796–1821). The archaeological riddle thus presented was solved only after my arrival at the village of Tumshuk, on the present high road, when the aged Karaul-bāshi, in charge of the local police post, related how about 1876 a force of the pretender Hākim Tōra had been routed by Yāqūb Bēg's son Hakaullah in a fight near Yaide, two marches further on by the road to Ak-su. Many soldiers of the defeated party had sought escape by turning into the sandy desert northward, and had miserably perished there by thirst and exhaustion under the hot August sun. Kelpin people subsequently searched the desert for the money and the valuables of the dead fugitives and buried the corpses.

Minor Tatis to south.

Smaller patches of débris-covered ground were also passed up to a distance of about 3 miles on the resumed march to the south-west of Chong-tim, and more traces of old canals cropped out between the dunes. Finds of one *Wu-chu* and four *K'ai-yüan* pieces showed that this ground, too, was occupied about the same period as Chong-tim. When after another desert camping we moved on May 19 to the south-west, guided by the conspicuous bold hills above Tumshuk, the dunes before long grew rare and low scrub became frequent. From about 2 miles beyond Camp 389 (Map No. 14. D. 5) small patches of eroded ground with 'Tati' débris again made their appearance. But the finds of coins soon showed that the area now reached must have

continued in occupation considerably longer than Chong-tim, and well into the Muhammadan period. Besides two T'ang pieces they comprised two Sung dynasty coins of A. D. 1034–8 and 1068–78 respectively, as well as a small silver coin of the Golden Horde struck at Khwārizm in A. H. 743.

Terminal delta of Kāshgar River.

Within a mile or so of these little 'Tatis' a belt of close-set tamarisk-cones was entered, such as usually marks approach to an old river-bed, and a little beyond we struck the well-defined dry bed of the Gōre-akin, lined by big Toghraks, live as well as dead. It was known to my guides as an old terminal branch of the Kāshgar River which passes through the defile between the two rocky hills west of Tumshuk (Map No. 15. D. 1) and was said to be traceable far away eastwards. Beyond this riverine belt, in all details recalling ground I had seen so often where the rivers of Keriya, Niya, etc., die away in the Taklamakān, I came upon groups of ruined dwellings rising on low mounds amidst tamarisk-cones of small size. But they were obviously not of any antiquity; they probably mark an attempt to reclaim this area from the jungle made during a period relatively recent when the Gōre-akin may for a time have again carried water. We had reached the northern edge of the terminal delta of the Kāshgar River, and the constant changes to which cultivation in such areas is subject have been noted too often before to need more than a passing reference.

Ruins near *Tumshuk*.

Arrived at the village of Tumshuk by the high road I found myself on ground close to ruins which had repeatedly before received attention from European travellers and archaeologists. Professor Pelliot in 1906 had devoted several months' work to the extensive ruins of Buddhist shrines found at the foot of the picturesque rocky hill which rises to the north-west of Tumshuk. On the rapid visit I paid to them I had the satisfaction to see with what systematic care and thoroughness his clearing had been carried out, even though it was obvious from the first that the temples and monastic dwellings of the site had all suffered badly through burning. On the opposite side of the hill chain and not far from the ancient circumvallation of *Tōpa-shahr* and the left bank of the Gōre-akin I inspected the scattered ruins of dwellings which are known as *Tokuz-sarai*. Coins of Muḥammad Arslān had been brought to me at Tumshuk as finds from the latter locality, and suggested that the abandonment of this site could not have taken place earlier than the fourteenth or fifteenth century. This dating has its special interest with reference to the previously noted 'Tati' remains lower down the Gōre-akin, and a rapid examination of the ruins confirmed the chronological evidence of the coins. A day's halt at Tumshuk allowed me to visit also the ruins to be found at both ends of the long-stretched ridge which continues the line of the previously mentioned hill to the south-east beyond the gap passed by the high road. Those at the southern end manifestly belong to a pre-Muhammadan stronghold (Fig. 339) and might have tempted exploration had it been possible for me to spare time for the protracted labours there needed.

Remains of *Tokuz-sarai*.

Hills near Tumshuk.

As it was, the necessity of keeping adequate time in hand for the manifold tasks of the summer months now urged a return to Khotan as early as possible. A variety of considerations imposed the route via Yārkand, and in order to cover the 350 odd miles which on it separated me from Khotan without too great a sacrifice of time, a succession of forced marches became necessary. The first of them, on May 21, carried me to Marāl-bāshi over ground which offered varied geographical interest. Right through from Tumshuk the road leads transversely past the foot of a series of rugged hill chains, all striking parallel to each other from north-west to south-east (Map No. 15. C, D. 1). Each of them is now broken up by erosion into what looks like a line of isolated rock islands cropping out from the flat plain. Yet uniform geographical formation shows clearly that they are but the remnants of one ancient range which started at a sharp angle from the outermost T'ien-shan north of Marāl-bāshi and once had its continuation to the south-east far away into the

Local worship of rocky heights.

Taklamakān.[2] The strikingly bold appearance presented by a number of these rocky heights must have made them objects of local worship from the earliest times. The highest among them is the conspicuous massif which rises to the east of Marāl-bāshi town to an elevation of over 7,000 feet (Map No. 15. c. 1), and this peak appropriately enough is respected as the *Mazār-tāgh* κατ' ἐξοχήν. A shrine at its north foot, above the oasis of Chār-bāgh, is a much-frequented place of pilgrimage. But others, too, of these hills are reverenced as the alleged resting-places of Muhammadan saints, and, if of lesser height, deserve their distinction as 'Tīrthas' by the impressive ruggedness of their cliffs as seen in the case of the Ōkur-mazār-tāgh (Fig. 344).

Termination of Kāshgar River.

Between the southern ends of these hill chains there extend wide stretches of low ground, much of it still partly permanent marsh, partly liable to annual inundation by the summer floods of both the Yārkand and the Kāshgar Rivers. It is in this area, the complicated hydrographic details of which could be elucidated only by a minute survey, that the Kāshgar River may be said to find at present its virtual termination. That this in earlier historical times lay further east appears very probable, both in view of what has been shown above about the irrigation once brought into the desert round Chong-tim and of what in November, 1913, I was able to ascertain as to exceptional floods on occasion reaching old beds traceable far away towards the extreme south-western edge of Ak-su cultivation.

Older line of high road.

Like every deltaic area, this ground between Tumshuk and Marāl-bāshi must be subject to considerable surface changes, and this is illustrated by two facts which present some antiquarian interest and hence may find brief record here. I ascertained that until the time of the Chinese reconquest in 1877 the whole area between the Mazār-tāgh and Ōkur-mazār-tāgh, which now affords room for the flourishing and relatively large oasis of Chār-bāgh (Map No. 15. c. 1), was uncultivable owing to annual inundations from the Kāshgar River and extensive marshes. In consequence the high road from Tumshuk did not pass by the line it now follows past the southern end of the Ōkur-mazār-tāgh and through Chār-bāgh, but struck from the gap between the Tumshuk hills across drift-sand desert westwards to the hill chain of Bēl-tāgh. This it crossed through a similar gap, and thence, skirting the northern edge of the marshes near the now abandoned hamlet of 'Old Chār-bāgh', passed from the north-east to Marāl-bāshi on the terminal Kāshgar River course.

Reconnaissance to north-east of Marāl-bāshi.

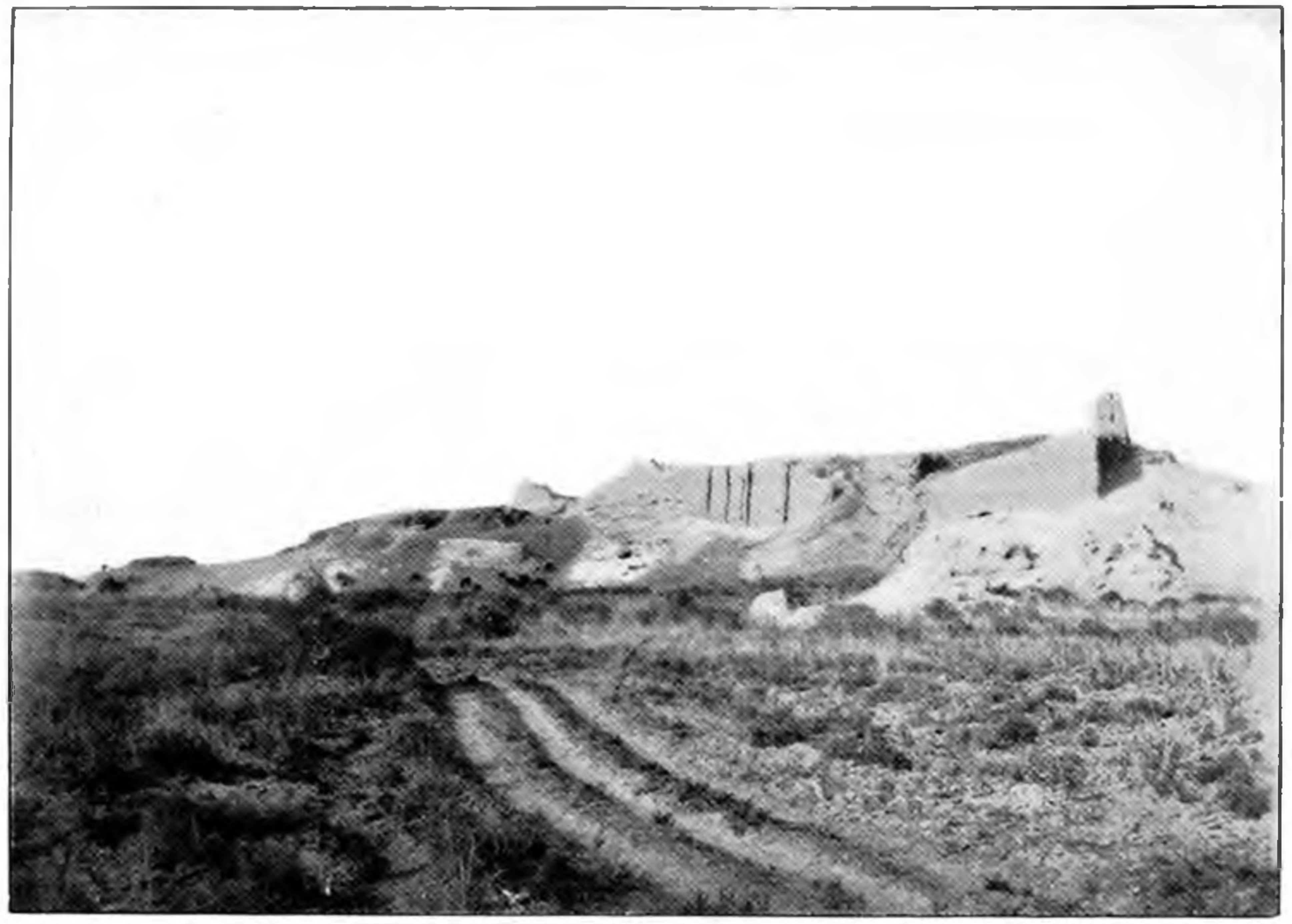
The evidence here afforded of a considerable change in quite recent times, affecting both the cultivated area of this tract and the line of an important high road, had its obvious bearing on the question of the ancient Chinese route to Kāshgar which my observations south of Kelpin had first raised. So, when on arrival at Marāl-bāshi I learned of the existence of some ruins where the old route passes through the Bēl-tāgh hills and of a ruined site beyond at the foot of Lāl-tāgh, I decided to spare a day for a reconnaissance in that direction. It proved a long and hot day's ride, close on

[2] Regarding the morphological connexion between the Mazār-tāgh hill chain on the Khotan River and this range, see above, p. 1285; *Geogr. Journal*, xlviii. pp. 113 sq.

The growth of Marāl-bāshi into an agricultural settlement of consequence seems to be of relatively recent date. The place was formerly known as Barchuk (see Yule-Cordier, *Cathay*, iv. p. 228); but I cannot trace any mention of it in early Chinese records. (The position of *Wo-shê-tê*, identified by M. Chavannes, *Turcs occid.*, p. 152, note, with Marāl-bāshi, cannot be fixed.)

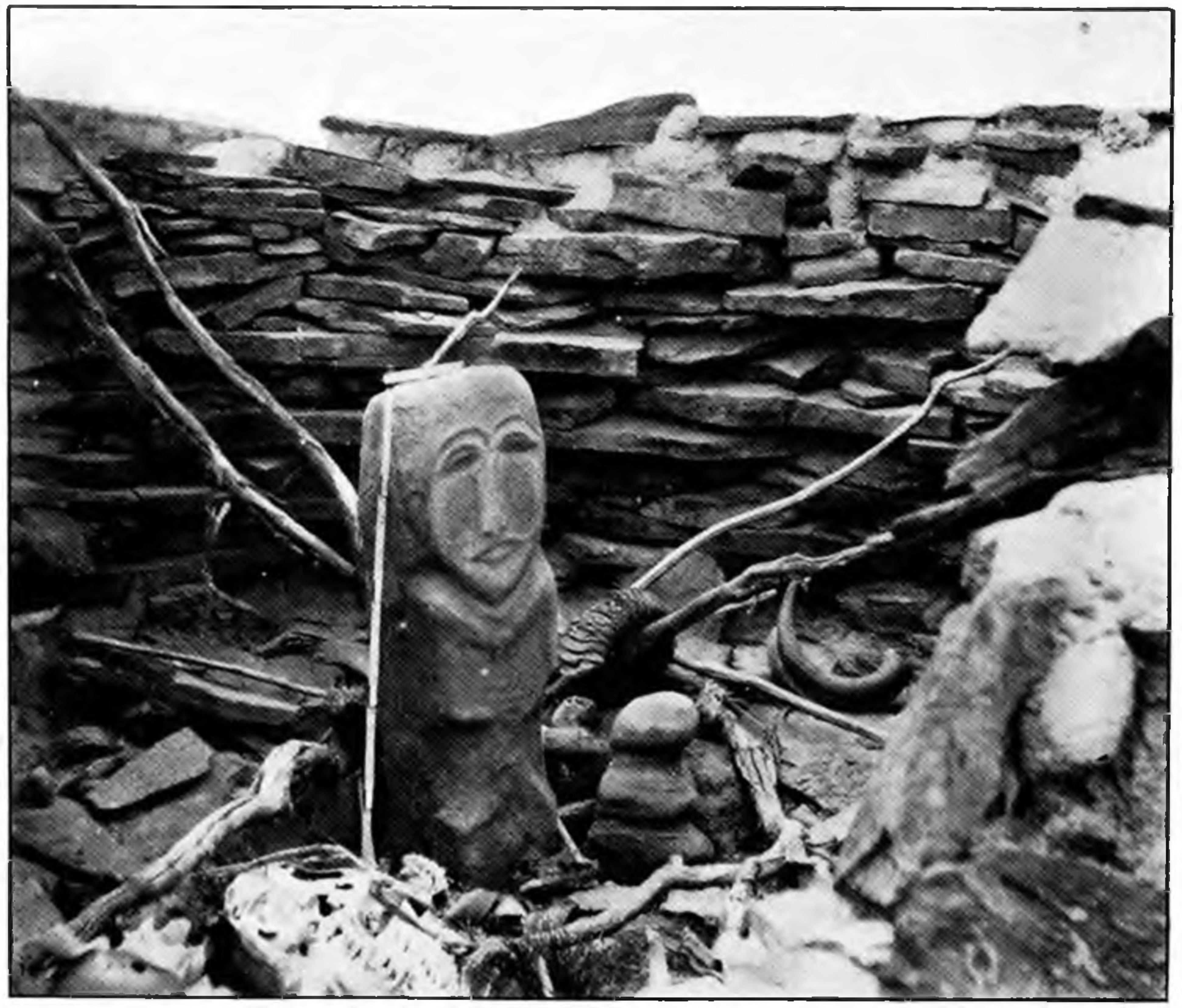
The irrigation of Marāl-bāshi is principally derived from a big artificial lake known as Chong-köl and constructed by the Chinese after 1877. Its position is roughly marked on Map No. 15. B. 2. It is filled each year by flood-water obtained from the Yārkand River and to some extent also from the Kāshgar-daryā. The bed of the latter lies so low that its water during a large part of the year can be utilized only for the irrigation of the lands reclaimed from the old marshes about Chār-bāgh. Hence whatever new land north of the river has been brought under cultivation during the ten to fifteen years preceding my visit depends on three conduits, or *nōr*, roughly constructed in wood, which carry the available canal water across the deep-cut river-bed.

There are three of these conduits, called *Ukat-nōr*, *Kara-kōl-nōr*, and *Tōpa-nōr*, and the new colonies opened by means of them bear the same names. The last of them had been established by P'an Ta-jên when in charge of the Yārkand district, then including Marāl-bāshi, and it was pleasant here, too, to find my old friend gratefully remembered by the settlers.



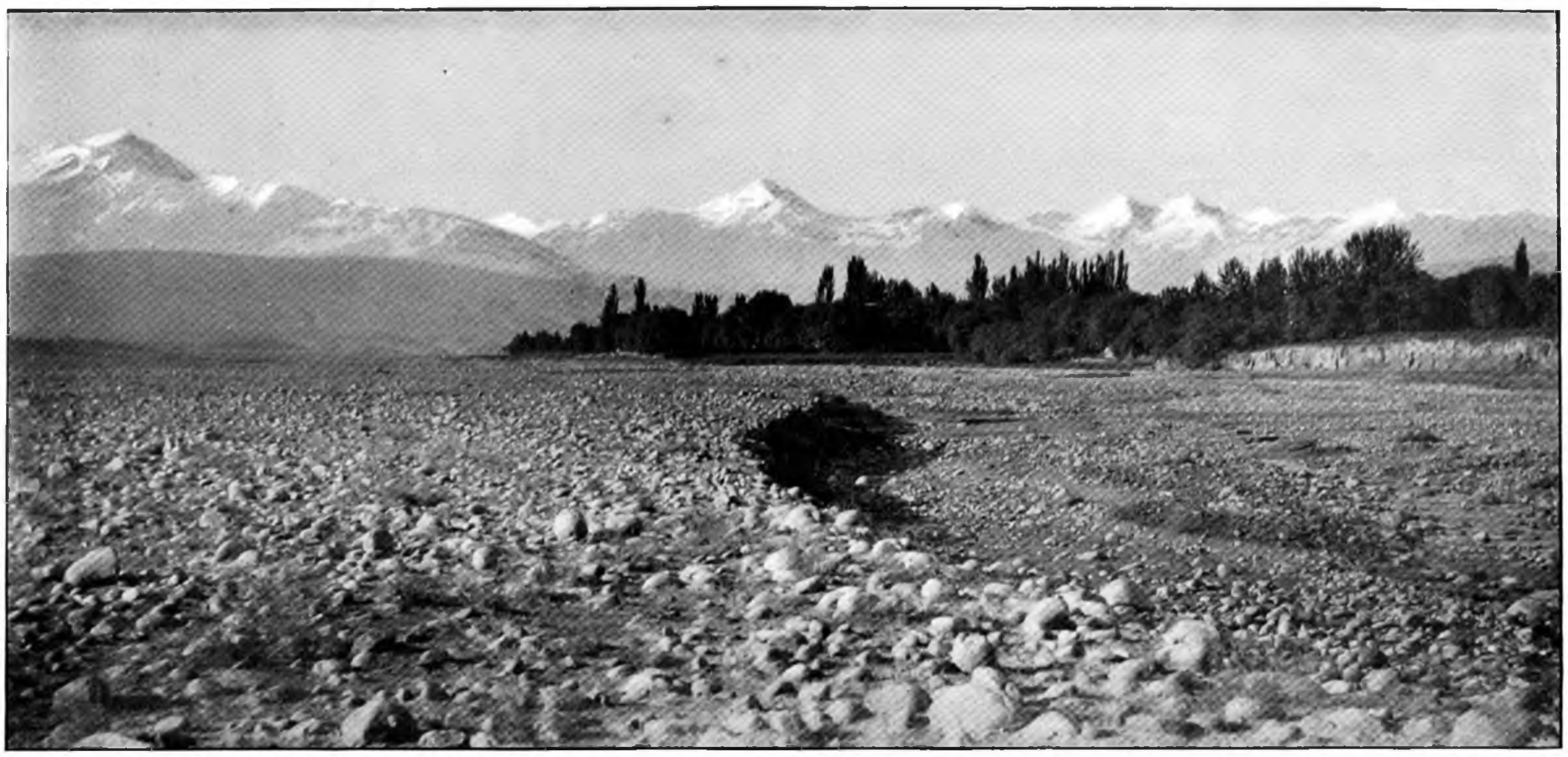
339. RUINS OF TUMSHUK-TĀGH-SHAHRI, SEEN FROM NORTH-EAST.

340. WALL CLOSING ACCESS TO RUINED TOWN ABOVE HĀSHA, SEEN FROM SOUTH WEST, WITH REFUSE HEAPS OF OUTWORK.

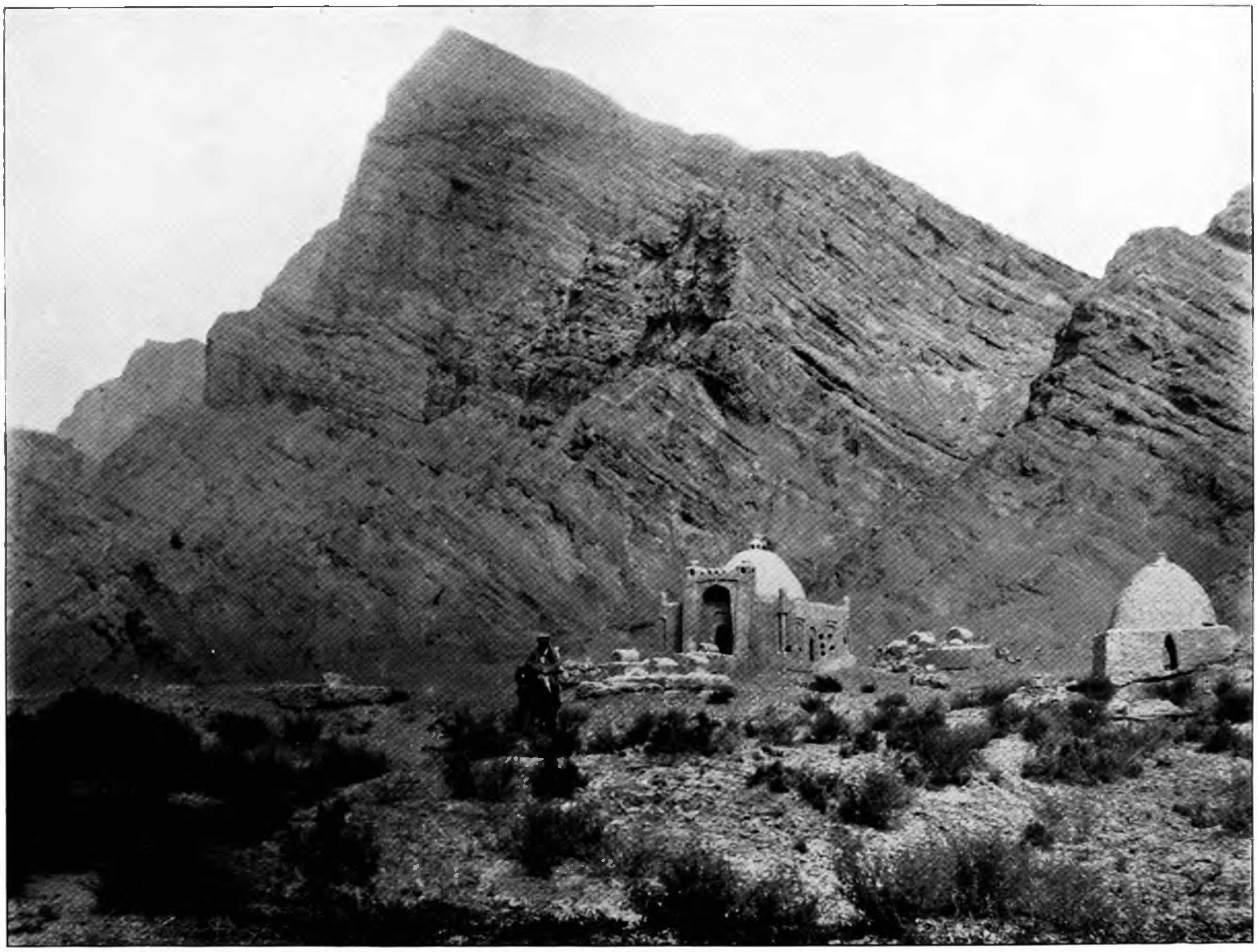


341. STONE IMAGE WORSHIPPED AT KIRGHIZ SHRINE OF CHAL-KOIDE, BELOW IDAK PASS KARA-TEKE RANGE.

342. VILLAGERS OF KELPIN, ANTHROPOMETRICALLY EXAMINED.



343. SNOWY PEAKS OF MAIN K'UN-LUN RANGE TO S.S.W. AND S.W. OF NŪRA.
Village lands of Nūra on loess beds in foreground.



344. MUHAMMADAN TOMBS NEAR SHRINE AT SOUTH FOOT OF ŌKUR-MAZAR-TĀGH, TUMSHUK.

40 miles, but brought its reward in a number of interesting indications, though I was not able to follow these up until fully five years later. Guided by Ayib Mīrāb, an observant old village headman in whose orchard I had camped, I rode first through the whole length of the main oasis to the north-east. On the way there was plenty of evidence of the great-extension which Marāl-bāshi cultivation had undergone since the Chinese after the reconquest had set about to develop the agricultural resources of this important route junction. At the same time it was easy to see how much this development was hampered, just as at Ak-su, by the fact that the population consists almost solely of Dolāns, who until a generation or two ago still lived mainly as semi-nomadic herdsmen.

Beyond the edge of the fields watered from the Tōpa-nōr we passed into an area covered with luxuriant scrub and tamarisks which extends right away to the barren hills of the Bēl-tāgh and Ōkur-mazār-tāgh. The whole had obviously once formed a huge inundation basin of the Kāshgar River, and must, in periods when the climate was moister and the river's flood volume larger than it is now, have been quite impassable for traffic during a considerable portion of the year. In this fact we may well have one of the reasons why the ancient route from Ak-su to Kāshgar, as already suggested, probably followed a line leading further north along the foot of the outermost T'ien-shan. But this and kindred questions must be left for discussion in connexion with my surveys of 1913. The growth of vegetation in this old marsh bed was so dense that it would have been difficult to reach our goal through it in time but for expert guidance. This was supplied by young hunters picked up at a small isolated holding which Tālib Ḥājī, an enterprising pioneer cultivator, had reclaimed in the midst of the jungle.

Marshes near *Achal-tāgh.*

Following winding tracks, with here and there almost wholly overgrown traces of what my guides called the 'old road' from Tumshuk, we approached at last the north-western end of the Ōkur-mazār-tāgh, here known as Achal-tāgh. Here I found dried-up pools marking a last remnant of the northern extension of the great marsh now reclaimed for the most part by Chār-bāgh. What from the distance had looked like a continuous ridge now proved to be broken by a narrow defile. Through this passes to the south-east a still clearly recognizable flood-bed which at times of great inundation was said to have carried water within living memory to the now utterly dry east foot of the Ōkur-mazār-tāgh.

Ruined watch-stations of *Arach.*

An isolated and precipitous rocky ridge, about a mile long and over 200 feet high in the centre, separates this gully from the wider defile at the foot of the Bēl-tāgh. This ridge (Fig. 332) is known as *Arach* and bears at both its ends remains of manifestly ancient defences. That their purpose was to close both gaps in the hill chain, so as to control any traffic which might pass through them from the side of Tumshuk or vice versa, was made perfectly clear by the configuration of the ground. The three hills of Ōkur-mazār-tāgh (Achal-tāgh), Arach, and Bēl-tāgh for a total distance of over 18 miles form a natural rock rampart which, except for the two gaps flanking Arach, can nowhere be crossed except on foot and by difficult climbing, as can be seen from Figs. 332, 344. Considering that the ground at the south-east end of the Ōkur-mazār-tāgh is even now very marshy and in quite recent times was impassable, the importance and natural strength of the defensive line thus furnished by nature is obvious. The only points needing to be watched were the defiles on either side of Arach. At the south-eastern end of this hill a low rocky spur was covered on its top for about 60 yards with foundations of walls built of sun-dried bricks, which are likely to mark a watch-station. Burrowings of 'treasure-seekers' had badly injured them. High up on the same side there rose a small square watch-tower, still more than 10 feet high, in a position very difficult of access over precipitous and perfectly smooth rock faces.

Following the Arach ridge towards its north-west end I found its crest occupied by a solidly built watch-tower, seen in Fig. 332, measuring 24 feet at its base and built of bricks about 14″ × 9″ × 3″

Watch-towers guarding defile.

in size. Layers of thin tamarisk branches were inserted between the courses, a clear indication of early date. The tower rested on a walled-up platform about 10 feet high on the north, and its present height above this seemed about 15 feet more. From where the crest of the ridge running down to the defile northward becomes less steep it is crowned by the remains of a solid brick wall, which could be traced for about 120 yards. In places where drift-sand had offered protection it still stood to a height of about 12 feet, with a thickness of $3\frac{1}{2}$ feet. Its material was the same as in the tower just described. Seen from the level ground of the gap, the wall appeared to turn first to the east and then to the south, ending below the tower. But owing to wind-erosion, which had carved out small Yārdangs, the exact line of the wall was here difficult to trace. I estimated the irregular area thus enclosed at approximately 300 yards across. The level portion of the interior was mostly covered with small dunes; but on one of the erosion terraces rising above these the foundations of a brick-built base, about 24 feet square, survived to a height of 5 to 6 feet. Potsherds of a coarse kind were found on eroded patches both within and outside this little circumvallation. On the opposite side of the defile which it was intended to guard a rugged foot-spur of the Bēl-tāgh bore the remains of another watch-tower. This was built of solid stamped clay with tamarisk twigs inserted in layers. The extant portion rose to a height of about 12 feet above the rock and measured about 30 by 27 feet on the top. This tower or watch-post stood about 100 feet above the level ground of the defile, in a position particularly easy of defence owing to its isolation and the steepness of the rock ledges below it.

Reported remains of *Lāl-tāgh.*

The very extensive view enjoyed from this point embraced all the detached rugged hill chains, from those first sighted at Chong-tim and Tumshuk to the big Mazār-tāgh in the south and the long-stretched Lāl-tāgh ridge in the north (Map No. 14. c, d. 5). It was at the foot of the latter that my guides pointed out to me in the distance the position occupied by what from their description I took to be the ruins of a Buddhist shrine of some size. Between Bēl-tāgh and Lāl-tāgh there stretched a wide belt of bare steppe partly covered with low dunes, and as the plane table indicated a distance of some 7 miles I had to renounce all hope of reaching the site on this occasion. Stories of 'Kōne-shahrs' seemed to cling particularly to the Lāl-tāgh, and the Kelpin people, too, whose desert route to Marāl-bāshi passes this hill chain on the north, had told me of 'Tati' remains to be found there in places. The verification of all this had to be left for a chance in the future. Before my departure from Khotan I received, however, some assurance that the Lāl-tāgh site was not altogether a creation of the 'Kötek-shahr' type; for Ayib Mīrāb then sent me through a trader the small collection of stucco relievo fragments described in the List below which, as he declared, he had secured from the 'Būt-khāna' of Lāl-tāgh. In October, 1913, I was able to make sure that the statement was correct—and also that his experimental burrowing had not been the first.

Journey via Yārkand to Khotan.

From Marāl-bāshi five rapid marches, made trying by heat and violent sand-storms, carried me to Yārkand. For archaeological observations they offered no scope. But in the course of survey work I was able to acquaint myself with the physical conditions which affect irrigation along the Yārkand River, and which must at all times have caused considerable fluctuations in the cultivated area of these straggling oases. At Yārkand a few days' halt was necessitated by a variety of practical tasks preparatory to my return to India, including the disposal of my brave camels from Keriya, which had rendered such valiant service on my desert travels. Then I set out for my base at Khotan and reached it by eight marches done mainly at night and diversified by a succession of seasonal 'Burāns'. The route was necessarily the same as I had first followed in 1900, and this enabled me to supplement the collection of small antiques from the old sites near Moji, already fully described in *Ancient Khotan*,[3] by some additional specimens.

[3] See *Ancient Khotan*, i. pp. 110 sq. for Togujai; for the 'Tati' of Kakshal, *ibid.*, i. pp. 106 sqq.

OBJECTS BROUGHT FROM DÉBRIS AREAS SOUTH OF KELPIN

Kelpin. 002. a–d. Four cowrie shells. Gr. length $\frac{3}{4}''$.

Kelpin. 003. Elliptical cornelian intaglio, flat. Female bust to L. Hair represented by two series of lines; combed down from top of head and forming heavy bandeau over forehead and ears. Bust draped, features rendered by grooves giving crude silhouettes. Poor work. $\frac{7}{16}'' \times \frac{5}{16}''$. Pl. V.

Kelpin. 004. Circular bronze seal with pierced shank behind. Intaglio design, very obscure. Prob. a horse, advancing L. Diam. $\frac{13}{16}''$, H. $\frac{3}{8}''$. Pl. V.

Kelpin. 005. Elliptical bronze seal with pierced shank behind. Intaglio design, indistinguishable. $\frac{15}{16}'' \times \frac{5}{8}''$.

Kelpin. 006. Elliptical bronze seal with broken ring behind. Intaglio design of bearded head looking L. Badly worn. $\frac{3}{4}'' \times \frac{5}{8}''$. Pl. V.

Kelpin. 007. Triangular bronze seal with pierced shank at back. Intaglio design, indistinguishable. $\frac{3}{4}'' \times \frac{5}{8}''$.

Kelpin. 008. a–f. Six beads: (*a*) cylindrical, cornelian. Length $\frac{7}{8}''$, diam. $\frac{7}{16}''$; (*b*) three-sided prism, pierced through top, cornelian. Length $\frac{9}{16}''$; (*c*) double-drum-shaped, yellow stone. Length $\frac{5}{16}''$; (*d*) spherical, dark blue paste. Diam. $\frac{1}{8}''$; (*e*) cylindrical, leaf-green paste. Length $\frac{1}{4}''$; (*f*) irregular, turquoise. Gr. M. $\frac{1}{4}''$.

Kelpin. 009. a–q. Sixteen beads: (*a*) spherical (half of), *millefiori*, yellow paste, one with black dots and circles. Diam. $\frac{5}{16}''$. Pl. VI; (*b*) cylindrical, green paste. Length $\frac{5}{16}''$; (*c*) cylindrical, cornelian. Length $\frac{3}{8}''$; (*d*) spherical, dark blue paste. Diam. $\frac{1}{8}''$; (*e*) spherical, light blue paste. Diam. $\frac{5}{16}''$; (*f–g*) spherical and drum-shaped respectively, yellow paste. Diam. $\frac{1}{4}''$ and $\frac{1}{8}''$; (*h*) cylindrical, dark blue glass, translucent. Length $\frac{7}{16}''$; (*j*) cylindrical, yellowish white pebble. Length $\frac{1}{4}''$; (*k*) drum-shaped blue-green paste. Diam. $\frac{3}{16}''$; (*l*) lentoid, white glass. Length $\frac{1}{2}''$; (*m*) cylindrical, lemon-coloured paste. Length $\frac{1}{4}''$; (*n*) spherical, black and white paste in rings. Diam. $\frac{3}{16}''$; (*o*) double-drum-shaped, yellow paste. Length $\frac{5}{16}''$; (*p*) spherical, black paste with zigzag line of white round centre. Diam. $\frac{1}{4}''$; (*q*) cylindrical (chipped), white stone. Diam. $\frac{3}{8}''$.

Kelpin. 0010. a–k. Ten beads: (*a*) spherical, *millefiori*, central rod of yellow paste surrounded by red, surface outside formed of alternate rods of black and white paste. Diam. $\frac{1}{2}''$. Pl. IV; (*b*) spherical, *millefiori*, mixed rods, red, green, and yellow paste. Eroded. Diam. $\frac{3}{4}''$; (*c*) spherical, honey-coloured glass. Diam. $\frac{7}{16}''$; (*d*) cylindrical, light blue paste. Length $\frac{5}{8}''$; (*e*) spherical, blue paste. Diam. $\frac{1}{4}''$; (*f*) cylindrical, part of; black paste inlaid with white rings. Length $\frac{1}{2}''$; (*g*) double-drum-shaped, half of; yellow glass. Length $\frac{5}{16}''$; (*h*) triangular pendant, part of (?); yellow glass. Gr. M. $\frac{5}{16}''$; (*j*) spherical, black berry (?). Diam. $\frac{1}{4}''$; (*k*) disc-shaped, white pebble. Diam. $\frac{3}{8}''$.

Kelpin. 0011. a–c. Misc. stone frs.: (*a*) elliptical chalcedony (?) seal, flat, with bevelled edge. No design. $\frac{7}{8}'' \times \frac{5}{8}'' \times \frac{1}{4}''$; (*b*) heptagonal red cornelian with edges bevelled on both sides. Pierced. $\frac{3}{4}'' \times \frac{3}{8}''$; (*c*) smooth brown stone, cylindrical, one rounded end, one broken. $\frac{13}{16}'' \times \frac{1}{2}''$.

Kelpin. 0012. a–m. Thirteen bronze rivet-plates, whole or fragmentary, slit for passage of strap as Chong-tim. 0032–3. Prob. parts of buckles. Three oblong as Chong-tim. 0032; six semicircular as Chong-tim. 0033 (all with oblong slit); one with elliptical opening; one (roughly) heart-shaped with circular opening; two complete shape indeterminable. All with rivets or rivet holes. Gr. M. $1\frac{1}{2}''$.

Kelpin. 0013. a–e. Five bronze buckle-rings: (*a–b*) oblong; (*c–e*) elliptical; (*a*) showing attachment to strap, by means of doubled strip of bronze passed round hinge and riveted to strap; (*e*) a buckle itself, with ring, tongue, and attachment complete.

Kelpin. 0014. a–c. Three bronze open-work pendants in form of dancing men, R. arm raised, L. arm pointing down, knees bent. Suspension ring above head. V-shaped support below feet broken off at end. Rude work. (*a*) complete; (*b*) without head, R. hand, L. foot or support; (*c*) only head and ring left. (*a*) $1\frac{5}{8}'' \times \frac{3}{4}''$. (*a*) and (*b*) Pl. VI.

Kelpin. 0015. a–g. Seven ornamental bronze rivet-plates: (*a*) sq.; (*b* and *c*) shield-shaped; (*d* and *e*) heart-shaped; (*f*) quatrefoil; (*g*) two crescents back to back, broken below. All solid with attachment pins projecting from under side. Gr. M. $\frac{5}{8}''$.

Kelpin. 0016. Lead disc. *Obv.* convex with relief rosette pattern. *Rev.* flat. Pierced in centre perhaps for use as spinning-whorl. See Kud. 009. Diam. $\frac{5}{8}''$.

Kelpin. 0017. a–b. Two frs. of bronze brooch (?): (*a*) shows socket for circular jewel and half of socket for lozenge-shaped jewel alongside; (*b*) shows socket for circular jewel. Orig. edges outlined with row of bead orn. on which traces of gilding remain. All jewels lost, and much corroded. Prob. consisted, when complete, of lozenge-shaped member in middle, with circular member at each end. (*a*) $\frac{3}{4}'' \times \frac{7}{16}''$, (*b*) $\frac{5}{16}'' \times \frac{7}{16}''$.

Kelpin. 0018. Crescent-shaped bronze orn., as Yo. 00176 and Khot. 007, but without projecting members. Ring only for suspension in middle of convex side. Design completely effaced and one horn broken. $1\frac{1}{4}'' \times 1\frac{3}{8}''$.

Kelpin. 0019. Plain bronze ring. Third of circumference missing. Diam. $\frac{3}{4}''$, breadth $\frac{1}{4}''$ to $\frac{1}{8}''$.

Kelpin. 0020. Bronze fr. resembling hub of small wheel. Flange at each end. At outside end is an additional wider orn. flange with petalled edge. Length $\frac{7}{8}''$, diam. $\frac{7}{8}''$ to $\frac{5}{16}''$. Pl. VII.

Kelpin. 0021. Bronze pendant, crescent-shaped, the tips being prolonged upwards by straight members joining them at right angles. One of these is broken, the other ends in a suspension ring. To lower side of crescent is attached an oblong hollow socket, triangular in cross-section, pierced at bottom, both ends, and sides for insertion of paste orn. Length $\frac{7}{8}''$. Pl. VI (upside down).

Kelpin. 0022. Flat bronze rod with middle grooved, orn., and pierced. Tapers towards ends, one of which shows spoon-like depression; other broken. Length $2\frac{5}{16}''$, width $\frac{1}{4}''$ to $\frac{1}{8}''$, thickness $\frac{1}{8}''$.

Kelpin. 0023. Fr. of bronze tubing, with flange at one end. Length $1''$, diam. $\frac{5}{16}''$.

Kelpin. 0024. Fr. of bronze pendant. Remainder shows two converging bars, which each turn out in a volute after point of junction. From between the volutes emerges a ring for suspension. Lower ends of bars broken. H. $1\frac{3}{8}''$.

Kelpin. 0025. Fr. of bronze rod. In middle, flat ring, with triangular member on either side; beyond which plain knob projects either way. One end broken. Part of orn. (?). Length $1''$.

Kelpin. 0026. Fr. of bronze sickle-shaped orn. with bevelled edges, hollowed on inside. Two rivet holes. Broken at sq. end. Length $\frac{7}{8}''$.

Kelpin. 0027. a–e. Five bronze frs., including (*a*) portion of elliptical buckle-ring; (*b*) fr. of ornamental plate; (*c*) half of doubled rivet-plate for attaching strap to buckle, with ring forming part of hinge. Cf. Kelpin. 0013. e; (*d*) hook; (*e*) end of pendant (?); three balls depending from crescent as Kelpin. 0021 (?). Gr. M. $1''$.

OBJECTS SAID TO HAVE BEEN FOUND IN DESERT NEAR KUDUGHUN

Kud. 006 (W. of). **Circular bronze seal** with pierced shank behind. Strung on red string with Kud. 007 and 008. Intaglio design of dragon rampant to R. Bad condition. Diam. $\frac{5}{8}''$. Pl. VI.

Kud. 007 (W. of). **Heart-shaped bronze seal** with pierced shank behind. Dotted border within which is intaglio design of two geese (?) facing one another. Bad condition. Received on string with Kud. 006 and 008. Length $\frac{5}{8}''$, gr. width $\frac{5}{8}''$. Pl. VI.

Kud. 008 (W. of). **Circular bronze button** with pierced shank behind. Relief satyr face with prominent eyes, broad nose, curling hair and beard, and pointed ears. Diam. $\frac{3}{4}''$. Pl. VI.

Kud. 009–10 (W. of). **Two leaden discs,** plano-convex; pierced; possibly spinning-whorls. Diam. $\frac{11}{16}''$, H. $\frac{1}{4}''$.

Kud. 0011–13 (W. of). **Misc. stone orns.:**

0011. Pendant of dark red cornelian, widening towards lower end, which is bevelled. Top pierced transversely. Elliptical in cross-section. Length $\frac{13}{16}''$, width $\frac{9}{16}''$ to $\frac{5}{16}''$, gr. thickness $\frac{5}{16}''$.

0012. Pendant of light red cornelian. Octagonal cylinder with pointed ends, and traces on one side of pierced projection. Cf. Chong-tim. 0030. $1'' \times \frac{5}{8}'' \times \frac{3}{8}''$.

0013. Oblong piece of white shell (?). Pierced twice lengthways. $\frac{13}{16}'' \times \frac{3}{8}'' \times \frac{3}{16}''$.

Kud. 0014–16 (W. of). **Misc. bronze frs.:**

0014. Circular bronze seal. Intaglio design indistinguishable. Shank behind, broken. Diam. $\frac{11}{16}''$.

0015. Elliptical bronze seal. Back rising into high straight shank with broken ring at apex. On one side of base, projecting knob prob. from air-hole of mould. Design never cut. H. $\frac{3}{4}''$, gr. diam. $\frac{1}{2}''$.

0016 (W. of). Fr. of bronze handle (?). $1\frac{5}{8}'' \times \frac{3}{8}'' \times \frac{1}{4}''$.

Kud. 0017. Circular bronze seal with pierced shank behind. Intaglio design of two birds facing one another. Rude work. Diam. $\frac{13}{16}''$.

OBJECTS FOUND AT CHONG-TIM SITE

Chong-tim. 001. Fr. of pottery, dark grey red-burning clay, wheel-made; hard fired, orn. outside with roughly scratched bands of intersecting chevrons. Gr. M. $3\frac{3}{4}''$.

Chong-tim. 002. Fr. of pottery from side and bottom of bowl with flat base; hard red clay with mottled green glaze inside and out, much worn. Chinese Han type. Gr. M. $3\frac{3}{8}''$.

Chong-tim. 003. Fr. of pottery from neck and shoulder of vase. Fine red clay. Plain, but outside of rim scored for attachment of handle. H. $1\frac{3}{4}''$.

Chong-tim. 004. Fr. of pottery from wall of vessel, dark grey; orn. in low relief with band of chevron in which are rosettes formed of round boss surrounded by dots filling angles. Above and below, narrow band showing dot rosettes separated by raised moulding. Beyond, scroll (?) orn. Gr. M. $3\frac{7}{8}''$. Pl. IV.

Chong-tim. 005. Fr. of pottery from rim of bowl. Coarse gritty red clay, orn. in low relief under green glaze with band of dots and floral orn. Near-Eastern, prob. Persian ware, previous to ninth century and perhaps as early as second century A.D. $1\frac{3}{8}'' \times 1\frac{3}{16}''$.

Chong-tim. 006–12. Seven frs. of glass, translucent

green, early mediaeval; 006 shows rolled over rim; 0011 and 0012 frs. of applied orn. bands and leaf (?). Gr. M. $1\frac{1}{4}$".

Chong-tim. 0021. a–c. Three frs. of sulphur. Gr. M. $1\frac{1}{16}$".

Chong-tim. 0022. a–e. Misc. bronze frs., corroded: (*a–b*) two plain rings. Diam. $\frac{1}{2}$"; (*c*) wire bent into ring. Diam. $\frac{3}{4}$"; (*d*) broken pendant (?), crescent with suspension ring from centre. Gr. M. $\frac{3}{8}$"; (*e*) straight tapering bar ending in ball and ring. Small tang below. Length 1".

Chong-tim. 0023. Fr. of rock-crystal, irregular hexagon, pointed both ends. $\frac{1}{2}" \times \frac{3}{8}"$.

Chong-tim. 0024. Fr. of bronze slag. Gr. M. 1".

Chong-tim. 0025. a–b. Two irregular frs. of bronze plate. Gr. M. 1".

Chong-tim. 0026. Spinning-whorl of grey clay; hemispherical, plain. Diam. $\frac{7}{8}$", H. $\frac{5}{8}$".

Chong-tim. 0027. Turned wooden reel (?); has central flange, besides flanges at ends, and short pin (of same piece of wood) projecting from one end. Traces of red lacquer (?) and white slip. Edges chipped. Length $1\frac{3}{8}$", diam. $1\frac{1}{8}$"; length of pin $\frac{1}{2}$", diam. $\frac{1}{4}$".

Chong-tim. 0028–9. Two frs. of bronze orns. *0028.* Pair of hollow bosses, joined side to side. Projecting pin on inside of one. Part of brooch (?). $1" \times \frac{1}{2}"$. *0029.* Semicircular disc with bevelled edges on outside. Inside, slightly hollowed, with remains of two projecting pins. $\frac{3}{4}" \times \frac{1}{2}"$.

Chong-tim. 0030 (S. of). Pendant of black paste, cylindrical, with a smaller cylinder, pierced, applied to one side for suspension. The main cylinder is pierced from one end, by narrowing hole, to $\frac{1}{16}$" from other end, and orn. with inlaid decoration. Round centre, festooned line of yellow paste, on each side of which is straight white line, followed by festooned line of red. Beyond, at each end, six straight lines of white. The small cylinder has three waved white lines. $1\frac{1}{4}" \times \frac{7}{16}" \times \frac{3}{4}"$. Pl. IV.

Chong-tim. 0031. a–b. Two frs. of sulphur. (*a*) Gr. M. $\frac{7}{8}$"; (*b*) Gr. M. $\frac{1}{4}$".

Chong-tim. 0032–3. Two bronze rivet-plates, fragmentary, slit for passage of strap; prob. parts of buckles. See Kelpin. 0012. *0032*, oblong, with pin at each corner behind, oblong slit parallel to one edge. $1" \times \frac{13}{16}"$; *0033*, semicircular, with three pins behind, and oblong slit parallel to straight side. $\frac{7}{8}" \times \frac{9}{16}"$.

Chong-tim. 0034–6 (S. of). Three frs. of glass. *0034*, end of rod of translucent greyish glass, swelling out at one end to hold small applied bulb. Other end broken. Length $\frac{3}{4}$", diam. $\frac{1}{2}$". *0035*, fr. of translucent 'bubbly' green glass. Gr. M. $1\frac{1}{8}$". *0036*, half bead of translucent yellow glass, spheroid. Diam. $\frac{1}{2}$", H. $\frac{5}{16}$".

Chong-tim. 0037. Shell bead, roughly disc-shaped but thicker at one edge. Faces hollowed and pierced. One edge chipped. $\frac{3}{8}" \times \frac{1}{4}" \times \frac{1}{12}"$.

Chong-tim. 0038 (S. of). Fr. of bronze buckle. Sq. plate with two flat teeth projecting from one side and bent over into hook. Two corners of plate and one tooth broken off. Iron rivet through plate for attachment to strap. Plate $\frac{3}{4}$" sq. Length with hook 1".

Chong-tim. 0039. Bronze disc, much corroded, possibly coin. Diam. $\frac{7}{8}$", thickness $\frac{1}{8}$".

Chong-tim. 0040. Bronze tube, ending in hollow bulb, other end and one side of tube and bulb broken away. On intact side of tube a curved hook (broken) projects towards bulb. Length of tube $1\frac{1}{2}$", diam. $\frac{7}{16}$". Length of bulb $\frac{5}{8}$", diam. 1". Pl. VII.

Chong-tim. 0041–4 (S. of). Misc. frs. of bronze orns. *0041, 0042.* Pair of oblong rings. Outer edges rudely bevelled. *0041*, $\frac{3}{4}" \times \frac{1}{2}"$. *0042*, $\frac{5}{8}" \times \frac{1}{2}"$. *0043.* Part of heart-shaped (?) ring, with remains of ring and pin at top. Diam. $\frac{3}{4}$", thickness $\frac{1}{8}" \times \frac{1}{16}"$. *0044.* Open-work orn. Two figs. of eight, one on each side of middle bar, and attached to it by additional bars. Prob. degenerate form of twin-bird design. Cf. Khot. 04. *c.* $\frac{3}{4}" \times \frac{5}{8}"$.

Chong-tim. 0045 (S. of). Colouring root. Stump covered with mauve bark. Found on 'Tati' S. of Chong-tim. Length $\frac{3}{4}$", diam. $\frac{3}{8}$".

Chong-tim. 0046. Oil from jar found by 'treasure-seekers' about 12. v. 1908.

Chong-tim. 0047. a–g. Eight paste beads; (*a*) half spheroid, green and buff; (*b*) half disc, red, yellow, green, and white; (*c*) cylinder, green; (*d–e*) discs, blue; (*f*) disc, grass-green; (*g*) triangular, green and yellow *mille-fiori* with centre spot yellow and red. Gr. M. $\frac{5}{8}$".

Chong-tim. 0048. Kernel of nut (?). Diam. $\frac{1}{4}$".

Chong-tim. 0049. a–b. Fabric frs.; (*a*) piece of checked cotton fabric; check printed in dark and light blue, colour much lost; sewn to fr. of plain buff. Much torn. *C.* 11" sq.; (*b*) band of faded brown cotton fabric, several layers thick, patched with unfaded piece of same. $1' 3" \times 3"$.

OBJECTS FOUND BELOW RUINED FORT AT SOUTH-EAST END OF HILL SPUR WEST OF TUMSHUK

Tumshuk. 0015. Fabric frs. comprising: fr. of fine golden saffron-yellow felt, $3" \times 1\frac{1}{4}"$, and fr. of dark red woollen (?) fabric, plain regular weave, $4\frac{1}{2}" \times 1"$. From south-west foot of Tumshuk fort.

Khakan-shahri. 001. Fr. of pottery, hand-made, admirably potted, of bright brick-red burning clay, well levigated, kiln-fired, very hard. Outer surface smooth and well burnished. Gr. M. $1\frac{7}{8}$".

LIST OF OBJECTS RECEIVED FROM MARĀL-BĀSHI AS HAVING BEEN OBTAINED AT LĀL-TĀGH SITE

Lal·tagh. 001. Stucco fr. L. foot broken across instep. Upper surface moulded and applied to lump of clay. Short big toe; nails marked. Red clay. $2'' \times 1\frac{1}{8}''$.

Lal·tagh. 002. Stucco fr. L. foot, broken ankle to heel. Sole as well as upper surface modelled; toes all of a length; nails not indicated. Red clay, burnt. $2\frac{3}{4}'' \times 1\frac{1}{4}''$.

Lal·tagh. 003. Stucco fr. Pair of hands, palm to palm as in adoration, broken below wrists. Thumbs missing, nails not shown. Red clay, burnt. Traces of writing. $2\frac{3}{4}'' \times 1\frac{1}{2}''$.

Lal·tagh. 004. Stucco relief fr. Part of oval jewel orn. Plain ground, showing traces of blue, surrounded by raised moulding, outside which is border of dots. Red clay, burnt. $1\frac{7}{8}'' \times 1\frac{1}{4}''$.

Lal·tagh. 005. Stucco relief fr. Top-knot of hair or drapery as in Mi. xi. 003, etc., showing faint traces of red paint. Red clay, burnt. $3'' \times 3\frac{1}{2}''$.

Lal·tagh. 006. Stucco relief fr., part of orn. or shield, roughly circular. At centre, boss surrounded by two plain mouldings, then ring of bosses, then two plain mouldings, and outside ring of circles enclosing dots. No traces of colour. Red clay, burnt. $3\frac{1}{2}'' \times 3''$. Diam., when complete, *c.* $5\frac{1}{2}''$.

OBJECTS FOUND OR ACQUIRED AT MOJI

Moji. a. Pottery fr. of coarse gritty ware, brownish grey colour, with stirrup-shaped handle nowhere detached from body of vessel; the two lower corners flattened out and stamped with rude anthemion orn. On top of handle a small round boss is applied. $3\frac{9}{16}'' \times 3\frac{1}{4}''$. Pl. IV.

Moji. b. Pottery fr., red, gritty ware with pale yellow outer face orn. by two horizontal bands of four sunk lines, connected by short vertical bands; above is trace of other similar decoration. $2\frac{1}{8}'' \times 2''$.

Togu-jai. 001. Pottery fr. of neck and shoulder of hard-fired dark red ware; junction of neck and shoulder orn. by single band of irregular punch marks. $4\frac{1}{16}'' \times 2\frac{1}{2}''$.

Togu-jai. 002–18. Seventeen glass frs., fine Arab; mediaeval. Gr. M. $1\frac{1}{4}''$. *0012*, Pl. VI.

Togu-jai. 0019. Glass rod splayed out at one end. Greenish yellow. $1\frac{1}{2}'' \times \frac{3}{4}''$ to $\frac{1}{4}''$.

Togu-jai. 0021. Fr. of bead of dark paste, inset with white ovals having dark blue centres. Gr. M. $\frac{5}{8}''$.

CHAPTER XXXIII

FROM KHOTAN TO LONDON

Section I.—PREPARATIONS AT KHOTAN

By June 9 I had regained Khotan and was once again installed at Niāz Ḥākim Bēg's garden palace, Nār-bāgh, my old quarters of 1901. I found the many cases deposited since the winter quite safe in the keeping of Badruddīn Khān, the Afghān Ak-sakāl of Khotan and my devoted local friend. Within a day or two they were joined from Kāshgar by the cart-loads of antiques which Sir George Macartney had taken care of since 1906–7 and by the big consignment of tin plates for packing secured in good time through his help. So without delay I was able to start work on the sorting and packing of my archaeological collections. In view of the risk involved in the long and difficult journey before them, the task needed all possible care and attention, and it cost me six weeks of constant toil before it could be safely completed. There were, indeed, dozens of men kept busy in the courtyard of Nār-bāgh over the making and tinning of cases, no effort being spared to assure as good a rate of progress as local ways and resources would allow. But the actual repacking of the antiques in the tinned cases had to be done entirely by my own hands. Among all the manifold tasks which thus kept me toiling day after day during the hottest season from daybreak till dusk, I may mention as perhaps the most troublesome the strengthening of all frescoes by a backing with glued strips of cotton cloth and then their tight repacking between compressed layers of reeds. Without the care and manual pains then taken, those ancient relics, composed often of most brittle and friable materials, could not have made undamaged a total journey of some 8,000 miles, including transport through high mountain ranges and across glacier passes, on camels, yaks, and ponies, and subsequent travel by cart, rail, and steamer.

Packing of antiques.

These labours had not proceeded for more than a few days when there were added to their burden the affliction and anxieties arising from a tragic and wholly unforeseen event. At the close of March I had sent Naik Rām Singh from Chīra to Mīrān for a supplementary task of importance. He was to photograph again the frescoes I had been obliged to leave behind, carefully reburied, on the walls of the temple M. v, and then to effect their removal with all the care which the experience since gained by similar operations elsewhere and an adequate allowance of time would allow. He had left me in what seemed good health and eager for the task. No news whatever had reached me from him since he started for his distant goal eastwards, and the shock was great when my 'handy-man', once so stalwart and strong, was brought back to me hopelessly blind. While rapidly travelling to Charkhlik with Ibrāhīm Bēg, the most reliable and efficient of my Turkī followers, he was attacked by severe pains in the head. Nothing before had suggested the approach of that fell disease, glaucoma. But, when at Charkhlik, he felt his pains increasing and suddenly lost the sight of one eye. With that heroic doggedness which is characteristic of his race, Naik Rām Singh clung to his task and persisted in proceeding to Mīrān. There, while he was getting the temple cleared again under Ibrāhīm Bēg's supervision, he was struck blind in his second eye also. Undismayed by this catastrophe, he insisted on waiting for some days by the side of the Mīrān stream, hoping for an improvement and a chance of doing his work. After another week spent at Charkhlik he at last consented to return, Ibrāhīm Bēg conducting him back with all possible care and expedition.

Tragedy of Naik Rām Singh.

Return of Naik Rām Singh to India.

I need not here relate the story, already fully told in my Personal Narrative, of the efforts I made to obtain professional examination and help as early as possible. During his brief rest at Khotan he bore himself most bravely, like the true soldier he was, and was full of hope for ultimate recovery. But at Yārkand, where I hastened to send him with all due provision for his comfort, the Rev. G. Raquette of the Swedish Medical Mission diagnosed the incurable disease. His report received three weeks later caused me the deepest distress, but at least assured me that the disease might have come on just as well if Naik Rām Singh had never volunteered for this journey. Nothing but a timely operation could have offered a chance of saving his eyesight—if premonitory symptoms which might remain unperceived even by the medical man had ever been rightly diagnosed. In accordance with Mr. Raquette's advice I arranged to have the poor sufferer conveyed to Ladāk as soon as the Kara-koram route opened, and thence to India. I spared no efforts to make all possible provision for his comfort and safety on the way. He travelled to Ladāk without any mishap. Thence Captain (now Major) D. G. Oliver, the British Joint Commissioner, saw him safely through to Kashmir. When Dr. A. Neve, the distinguished head of the Srīnagar Church Mission Hospital and an old friend, could only confirm the sad verdict, there was a brother at hand to take poor Rām Singh home to his native village near Firōzpur in the Punjab. Thence he came to meet me on my passage through Lahore in December, a meeting made doubly distressing by the signs of far-advanced mental decay I then noticed in the sufferer. His substantial pay accumulations were entrusted by me to the safe keeping of his regimental authorities, who showed the greatest solicitude in his case. During my visit to Calcutta I did my utmost to urge the claims of this faithful companion to special consideration. H. E. the late Lord Minto, then Viceroy, showed kind interest in his case, and soon after I learned to my relief that the Government of India had generously granted him a special pension, fully adequate to his and his family's needs. When before the end of 1909 death had relieved him from all further suffering, the greater part of the pension was continued to the widow and son as a well-deserved act of grace.

Chiang Ssŭ-yeh's scholarly help.

The strain thrown upon me by all these anxieties and exacting tasks was great. All the more I appreciated the comfort of having Chiang Ssŭ-yeh by my side to share my cares and sorrow. He himself was always hard at work on urgent scholarly tasks that I had set him : the preliminary decipherment and transcription of the ancient Chinese records from the Tun-huang Limes and elsewhere, and the preparation of a rough slip catalogue for at least a portion of the Chinese manuscripts recovered from the 'Thousand Buddhas'. The great value of his work on the former task has been duly acknowledged by M. Chavannes, the most competent of judges. As regards the latter, the mere fact that it has been impossible to secure the complete cataloguing of those thousands of manuscripts, during the years passed since their safe deposition in London, makes me now appreciate all the more what Chiang Ssŭ-yeh achieved for at least a third or so of their bulk during those weary hot weeks at Khotan.

Preparations for K'un-lun expedition.

In addition to all labours of packing, much care and trouble were entailed by the preparations for my long-planned expedition into the high K'un-lun ranges south of Khotan. My explorations of 1900 and 1906 in the Karanghu-tagh mountains had proved the impossibility of reaching the headwaters of the Yurung-kāsh through the deep gorges in which the river cuts its way westwards. So I had decided long before upon a fresh effort to be made from the east where that as yet wholly unexplored mountain region joins the extreme north-west of the high Tibetan plateaus. Thence I proposed to make my way past the sources of the Keriya River and along the unsurveyed southern slopes of that portion of the main K'un-lun range which with its glaciers feeds the uppermost Yurung-kāsh. In the end this expedition was to bring R. B. Lāl Singh and myself to the south-eastern sources of the Kara-kāsh River. Descending this we were to gain the trade

route to Ladāk at the north foot of the Kara-koram passes, where the Kirghiz transport arranged for my big convoy of antiques and all heavy baggage would await us.

Difficulties of ground and transport.

I knew well the formidable obstacles which the difficulties of the ground in the great mountain ranges, and even still more, perhaps, the utter barrenness of the inhospitable high plateaus, were bound to present. For the success of this concluding expedition the utmost care in all arrangements about transport and supplies was essential. The problem was made particularly serious by the fact that from the time of leaving Polur, the last inhabited place at the foot of the K'un-lun, until our arrival at the highest point on the Kara-kāsh where a depot of supplies could be sent up by Satip-āldi, the Kirghiz Bēg on the Kara-koram route, the maintenance of ourselves and of our animals could be provided for only by means of supplies carried with us. The intended explorations could not possibly be carried out in less than forty days; yet none of our available beasts of burden, ponies and donkeys, would be able on such high ground to carry more than their own fodder-supply for this period. For the complications introduced by this and other factors and for the efforts it cost to meet them I may refer to my Personal Narrative.

R. B. Lāl Singh's surveys.

To my great relief R. B. Lāl Singh safely rejoined me on July 20 after a separation of nearly three months, having successfully fulfilled all the tasks entrusted to him. He had first carried out very useful surveys along the T'ien-shan from Ak-su to the watershed north of Kāshgar (Maps Nos. 1, 5, 6, 9, 14, 19, 23). Then, after reaching Gūma in the south by a route not previously surveyed by us, he had mapped the last portion of *terra incognita* on the northern slopes of the K'un-lun between the Kiliān and Middle Kara-kāsh Rivers (Maps Nos. 16, 17, 21). A week later the final completion of my packing labours enabled me to take a short respite by paying a farewell visit to the site of the ancient Khotan at Yōtkan. The annual washing for gold in the 'culture strata' buried below the great deposit of alluvial loess soil had already begun, and I was able to add, by direct acquisitions from the villagers, to my collection of those terra-cotta grotesques and similar small antiques which the buried débris layers still continue to yield after decennia of exploitation.[1] I used the same occasion also for increasing my anthropometrical materials by measuring a considerable number of typical Khotan folk. Short as this last excursion into rural Khotan had to be, it helped to show me once again how rapidly the cultivation had been extending in recent years, not merely on the desert edges of the oasis, but also by reclamation of much land within, which in 1900–1 I had still seen as marshy or *shōr*-covered waste, e.g. round the Aidin-köl or at Shōr-bāgh west of Khotan town.[2]

Yōtkan site revisited.

[1] Cf. above, pp. 97 sqq.

[2] In view of the geographical and antiquarian interest attaching to such changes in the cultivated area which only very large-scale maps would allow to be graphically recorded, I may reproduce here, for whatever they are worth, the statistical figures which Tokhta Ḥājī, then Bēg of the Tosalla canton (*minglik*) and a man of considerable influence, obtained for me in July, 1908, from Ya-mên records. They comprise not the whole of the Khotan oasis, but only the portion west of the Yurung-kāsh, the rest, including the large and fertile cantons of Yurung-kāsh, Sampula, Lop, etc., having been formed into the separate *hsien* of Lop between 1901 and 1906. My general impression is that the figures for the population are, if anything, under-estimated. The acreage is shown in Chinese *mou*; that of 'new cultivation' indicates additions assumed to have been made since 1902. A comparison of these figures with the avowedly rough estimates recorded in 1901 (see *Ancient Khotan*, i. p. 132, note 3) is not without interest.

Canton.	*Homesteads.*	*Souls.*	*Mou estimates of* Old cultivation.	*Mou estimates of* New cultivation.
Ilchi (Khotan Town)	1947	6480	15616	553
Tosalla	6610	29181	81640	1656
Borazān	3269	21732	78151	1205
Sipā	4213	19583	80608	4466
Bahrām-su	2034	11811	55980	3612
Kayāsh	1306	8281	46141	1357
Mākuya	2838	13054	55981	2712
Kuya	2659	12261	70243	9607
Kara-sai	980	5433	46141	11318
Bogar-ming (*a*)	320	3080	13684	1251
Tāgh-ming (*b*)	3251	18745	40131	1556
	29427	149641	584316	39293

(*a*) Regarding this new colony, see above, p. 1273.

(*b*) This new canton was said to have been formed by detaching the southernmost villages of Tosalla, Borazān, and Sipā.

Departure from Khotan.

On August 1 I had the satisfaction of seeing my heavy convoy of antiques filling ninety-three cases started on its long journey. Tila Bai, in whose care I could trust, was to take it to Sanju, and thence, when the subsiding of the summer flood would allow of further progress in safety, across the glacier pass to Suget on the upper Kara-kāsh, where I hoped to rejoin it. Two days later I left Khotan myself, and, after crossing by boat the Yurung-kāsh, which now rolled its huge summer flood in numerous beds, proceeded through smiling fertile lands and across canals, overflowing with water like rivers, to Kotāz-langar on the south-eastern edge of the oasis.

There next morning I bid farewell to Chiang Ssŭ-yeh and Badruddīn Khān, who both had helped me so manfully through those long hot weeks of trying labour. The services which Badruddīn Khān's unfailing care had rendered for my work ever since my first expedition had proved on many occasions very valuable, even when I was hundreds of miles away from his cherished Khotan. So it was with great satisfaction that I learned later of their having helped to secure for him the coveted title of 'Khān Sāhib' awarded by the Indian Government. It was harder still to part with my devoted Chinese Secretary, the most capable and efficient helper for scholarly work in the field Asia had ever given me. But Sir George Macartney's kindness had secured for him the appointment of Chinese Munshī of the British Consulate General at Kāshgar, and I fondly cherished the hope of yet seeing him there again.

Section II.—ACROSS THE K'UN-LUN RANGES

The two long marches which followed took us across the barren gravel glacis of the massif of the Tikelik-tāgh (18,780 feet triangulated height), overlooking the plains like a huge bastion of the K'un-lun. Above one of the numerous deep ravines, all waterless even at this season, which descend its slopes, I found a strange Mazār known as *Kapak-aste* ('where the gourd was dropped;' Map No. 28. c. 2). Below the collection of staffs, here hung with hundreds of broken gourds instead of the usual rags, there lies a large boulder covered on its flat top with twenty-two cup-marks of varying sizes, from 5 inches diameter downwards. Within a few yards are found two smaller flat-topped boulders, also bearing cup-marks. Local legend connects the stones with the 'Four Imāms' whose supposed resting-place is venerated at a much-frequented shrine to the north-west of Polur to be presently mentioned. On their way they are said to have halted here and shaped the stones for their drinking-cups. It is highly probable that these cup-marks are of prehistoric origin, and also that we have here another case of local worship of earlier periods surviving in Muhammadan guise.

Mazār of *Kapak-aste.*

'Kōne-shahr' of *Hāsha.*

Cultivation was first met with again in the valley of the Kara-tāsh River, where a string of hamlets, collectively known as Hāsha, stretches down the narrow alluvial belt towards Chira (Map No. 28. c. 2). About a mile from the point where the route descends steeply from the stony plateau to the river a narrow tongue of table-land between the Gō-jilga ravine and the Kara-tāsh River bears the remains of what is known as the 'Kōne-shahr of Hāsha'. It occupies a naturally strong position, protected on all sides by steeply eroded conglomerate cliffs and curiously resembling that of Yār-khoto, but smaller. At about 620 yards' distance from the point where the plateau tongue ends, falling off towards the river in an unscalable precipice, a massive wall runs across it from ravine to ravine, cutting off access. This wall (Fig. 340) is about 120 yards long and still rises to about 20 feet where best preserved. Though massive, it is but roughly built with courses of water-worn stones from the river-bed, set in clay. Two bastions, at a distance of about 30 yards from either ravine, project from the wall to about 30 feet. Between them the ground has been enclosed with a rough outer wall, about 10 feet thick, forming a kind of outwork about 60 yards long and about 25 yards wide. Within it deep pits dug by Hāsha villagers for manuring soil have

laid bare layers of refuse intermixed with gravel to a depth of 10 to 12 feet. In a layer near the top I found embedded remains of woollen fabrics (Hasha. 005).

Exploitation of refuse deposits.

Here and within the main wall the soil is made particularly valuable for manuring by the abundance of bones which are found amidst the deposits of refuse. In consequence the whole of the interior is covered with pits and burrows, much in the same way as ancient village and town mounds in the Peshāwar valley or at Akra, near Bannu, are exploited on the Indian North-West Frontier. Of structural remains no trace survives on the surface apart from the wall already mentioned and a second inner one, built across the plateau tongue where it narrows to about 60 yards, and similar in construction. Débris of coarse but remarkably hard-fired pottery can be picked up all over the interior amidst clay and stones which once served in walls of dwellings, etc.[1] Finds of coins or of other antiques were stoutly denied by the Hāsha people, and in their absence it is difficult to form any opinion as to the time when the site was occupied. But the depth of the refuse layers points to prolonged occupation and a population denser than that of the narrow cultivated strips of the present Hāsha.

Village tract of Chakar.

The same day's march brought me to Chakar (Map No. 28. D. 2). This relatively large collection of hamlets stretches along the river which, joined by the Ulūgh-sai from the east, carries its water to Gulakhma on the high road. Here I found plenty of fertile loess soil left uncultivated, not from any difficulty about water—of this there is plenty, not in the river-bed alone but also in springs to the west of it—but solely through want of labour. Yet here, as elsewhere in this submontane tract known as *Tāgh* between the rivers of Chīra and Keriya, the increase in the population since the Chinese reconquest was acknowledged on all sides to have been very large indeed.[2] On August 6, after a long dreary march across bare stony slopes which eastwards were overlain in part by dunes, I reached the fertile oasis of Nūra (Map No. 32. A. 3). Here at an elevation of over 7,000 feet there was at last cool air, and in the evening the dust-haze lifted, which all through my stay at Khotan and since had completely hidden the view of the mountains. To the south there rose a magnificent line of snowy peaks (Fig. 343), some over 21,000 feet in height, as if to lighten my farewell to familiar oases and deserts by the prospect of fascinating travel in an unexplored high mountain region.

Oasis of Nūra.

[1] The following are specimens of pottery fragments, etc., brought away from the site:

Hasha. 001. Fr. of pottery, hand-made, of ill-levigated dark grey-burning clay; fired on an open hearth. 3″ × 2″.

Hasha. 002. Fr. of pottery, hand-made, of peculiarly ill-levigated clay, burning deep brick-red; very hard fired on an open hearth. Considering the quality of the fabric, the excellence of the firing in these specimens is remarkable. $2\frac{3}{4}$″ × $1\frac{1}{2}$″.

Hasha. 003. Fr. of pottery, hand-made, similar to Hasha. 002; blackish-grey clay burning to brick-red. $2\frac{1}{4}$″ × 2″.

Hasha. 004. Fr. of pottery, hand-made, of light red-burning clay, similar to Hasha. 002.

Hasha. 005. Ragged frs. of woollen fabrics, buff, sulphur, sienna, brownish-red, and crimson—with buff woollen cord and small quantity of fine wool. Gr. M. of fabrics, 11″.

[2] Muhammad Yūsuf Bēg, who was then in charge of the *Tāgh* subdivision of Keriya and whose help about supplies, transport, etc., greatly facilitated my start into the high mountains south, communicated to me from the local official records the following as to the number of households reckoned for assessment purposes at the resumption of Chinese rule and in 1907 respectively:

Village tract (kent).	*Households* (*1878*).	*Households* (*1907*).
Nūra	53	277
Chakar	33	470
Hāsha (or Ambar)	45	450
Sai-bāgh (incl. Tört-Imām)	64	365
Pōlur	10	90
Ulūgh-sai (Upper Keriya River)	16	150
Total	221	1802

Not having seen more than the chief villages of these tracts, which all, as the map shows, stretch in scattered hamlets for considerable distances up the valleys, I cannot vouch for the approximate accuracy of the above figures. But judging from what I saw they appeared to be, if anything, under-estimated.

Tim site near Nūra.

This glorious view was still clear when next morning I proceeded northward to visit an old site known as *Tim*, which had first been noticed by Professor Huntington.[3] The route led first along a canal carrying ample water to the small outlying settlement of Yalghuz-bāgh, and beyond it through a sandy steppe in which a grass-covered Nullah clearly marked a former continuation of this canal, but of larger size, towards the deserted site. This proved to be situated fully 8 miles from the chief hamlet of Nūra. The 'Tim' which has given the site its name was found to be a circular mound built of layers of rubble and stamped clay, measuring about 36 feet across at the top, with a height of approximately 16 feet. Its interior had been completely dug up, no doubt for 'treasure'; its shape suggested that it represented the remains of a completely ruined Stūpa. About 250 yards to the north-east rose another mound of similar appearance, but smaller. This showed a diameter of about 21 feet with a height of 6 feet, and was built of sun-dried bricks, 14″ × 8″ × 3″. It, too, had been completely cut through.

Débris-strewn area.

Pottery débris was abundantly strewn over the ground for about half a mile south of the large mound and was said to extend northward for a 'Pao-t'ai's distance' (about 2 miles or so). The potsherds, of which specimens are described below,[4] seemed all very hard and to resemble in their colouring, dark red or terra-cotta, and make those found at the Hanguya Tatis, Rawak, and Yōtkan. One small terra-cotta fragment, Nura. 005, appears to have belonged to some relievo. No coins were found by us, nor were any heard of. I believe it may be taken for certain that the site was occupied in Buddhist times, but there is nothing to show that it marks a large settlement. I saw no pottery remains beyond the old canal, which still carries the surplus water of Yalghuz-bāgh at this season, and passes some 35 yards to the west of the larger mound; to the east of the latter they disappeared after about 500 yards. This makes it probable that the old settlement occupied, just like the present Nūra, a narrow strip of ground. A plain of fertile loess stretches as far as the wide rubble bed of the river which descends from Sai-bāgh and after heavy rain is said to carry its flood-water down to the 'Sai' east of Domoko.

Pilgrimage place of *Tōrt-Imām*.

This was the last old site to be visited by me on this journey; for the picturesque little oasis of *Tört-Imām*[*lar*], the 'Four Imāms', to which that day's march brought me, retains no traces of antiquity in spite of its fame as a pilgrimage place and the legends which cluster around its sacred tombs.[5] That these Muhammadan shrines owe their existence to some earlier local worship is all the same very probable; but as the oasis lies far off from the high road, embedded between long bare foot spurs of the mountains, it was not likely to attract the attention of those Buddhist pilgrims to whom is due whatever we know of the ancient *topographia sacra* of Khotan.

However, our old Chinese sources do not fail us altogether about the geography of this region;

[3] Cf. Huntington, *Pulse of Asia*, p. 165.

[4] The following are specimens of ceramic fragments found at the *Tim* site of Nūra:

Nura. 001. Pottery fr. from coarse hand-made vase of reddish brown ill-levigated clay. From slightly bulging shoulder projects stump of broken (probably horizontal) handle. Here is scored horizontal line crossed by row of short perpendicular lines. Below, small incised circles, three rows, set in inverted triangle. Below again, raised horizontal line, below which incised hatching. $3'' \times 2\frac{1}{2}'' \times \frac{7}{16}''$.

Nura. 002. Pottery fr. from rim and neck of vase. Clay a light terra-cotta colour, ill-levigated. Flat edge with flanged rim. Hand-made, no orn. $3\frac{1}{2}'' \times 2'' \times \frac{1}{4}''$ to (rim) $\frac{5}{8}''$.

Nura. 003. Pottery fr. of vase of very hard clay. Inner surface drab, outer light terra-cotta coloured; no orn.; hand-made. Triangular, with 2″ sides. Thickness $\frac{3}{16}''$.

Nura. 004. Pottery fr. of hand-made vase of light red clay; no orn. $1\frac{3}{8}'' \times 1\frac{3}{16}''$.

Nura. 005. Terra-cotta fr. of relief drapery (?). $1\frac{1}{4}'' \times \frac{7}{8}'' \times \frac{1}{4}''$.

Nura. 006. Pottery fr. from vase of dark red clay. Outer surface has light grey slip on which are painted black bands. $1\frac{3}{4}'' \times 1\frac{1}{2}'' \times \frac{1}{4}''$.

Nura. 007. Triangular fr. of mica-schist with intruding quartz (?). $1\frac{7}{8}'' \times 1\frac{1}{8}'' \times \frac{3}{8}''$.

[5] For these legends of the 'Four Imāms' and their origin, cf. the exhaustive comments of M. Grenard in *Mission D. de Rhins*, iii. pp. 13 sqq.

for the small territory of *Ch'ü-lê* 渠勒, which the Former Han Annals note to the south of Yü-mi 汙彌,[6] can safely be identified with the present submontane tract known as *Tāgh* and comprising, as mentioned above,[7] the various small settlements from the Keriya River to those on the river of Chīra. Of Yü-mi I have made it certain, as I believe, that it comprised the whole of the oases between Chīra and Keriya,[8] and the *Tāgh* subdivision lies, as Maps Nos. 28, 32 show, exactly to the south of these. Ch'ü-lê is described as a very small territory with only 310 families. We have no means of fixing the position of its 'capital . . . the city of Keen-too'. The equally small territory of *Jung-lu* 戎盧, which is mentioned as lying to the east of Ch'ü-lê and off the high road, may safely be located in the submontane tract east of the Keriya River, from Achchan to beyond Surghak.[9] The Later Han Annals do not mention Ch'ü-lê; but in the *Wei lio* it appears along with Jung-lu, Han-mi, and P'i-k'ang as a petty kingdom dependent on Yü-t'ien or Khotan.[10] The absorption by the latter of all these little states is distinctly attested by a passage of the T'ang Annals where we meet with the name of Ch'ü-lê for the last time.[11]

Territory of *Ch'ü-lê* identified.

One march from Tört-Imām brought us to the village of Pōlur (Map No. 32. C. 4), some 8,500 feet above the sea. It nestles above a side stream of the Keriya River, at the very foot of high snow-covered spurs which descend straight from the great wall of the K'un-lun Range southward. It was the last inhabited place of Chinese Turkestān I was to see for long years, and the starting-point for our expedition into a difficult and for the most part wholly unexplored mountain region. Three busy days, which were needed for final preparations, enabled me also to secure anthropological measurements among these 'Tāghliks'; their type was of interest as it showed an unmistakable difference from that of the people in the Khotan oases and suggested, perhaps, early Tibetan influence from the south.[11a] Then on August 12 we set out for the long-planned explorations. Their objects were purely geographical, and no detailed account of them is here needed; for the ample results secured, as well as the efforts and sacrifices which they involved, have already been fully recorded and illustrated in my Personal Narrative.[12] But a rapid synopsis may all the same fitly find a place here, were it only to indicate the few points on this journey of more than 500 miles across barren wastes of rock, ice, or detritus which can ever have been scenes of human endeavour since history dawned for mankind.

Preparations at Pōlur.

The route through the terribly confined gorges above Pōlur, which brought us after four trying marches to the northernmost high plateau adjoining the outer main K'un-lun Range at an elevation of about 15,000 feet, has indeed been used about half a dozen times by European explorers since the 'Pandits' of the Forsyth Mission traversed it in 1873. But important as it is by giving direct access to the great uplands of westernmost Tibet, it can never have served for movements of any conse-

Difficulties of Pōlur gorges.

[6] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, x. p. 29.

[7] See above, p. 1321, note 2.

[8] Cf. *Ancient Khotan*, i. pp. 167, 467, where full references will be found to the passages of the *Wei lio* and T'ang Annals, translated by M. Chavannes, which mention this territory under the graphically but slightly differing name of *Han-mi* 汗彌. For a fuller notice of the same territory under the name *Chü-mi* 拘彌 in the *Hou Han shu*, see now Chavannes, *T'oung-pao*, 1907, pp. 170 sq. The identification remains unaffected by the question as to the position of the capital of *Yü-mi* (*Han-mi*), which Herrmann, *Seidenstrassen*, i. pp. 96 sqq., has discussed before being in a position to make adequate allowance for the evidence of archaeological facts and recent surveys.

[9] See Maps Nos. 32, 38. This location is made quite certain by the mention of the *Ch'ien Han shu*, Wylie, *loc. cit.*, p. 29, that Jung-lu lay four days' journey to the south of Ching-chüeh, i.e. the tract represented by the Niya Site; see above, p. 219.

[10] See Chavannes, *T'oung-pao*, 1905, p. 538; for *P'i-k'ang* 皮亢 or *P'i-shan*, corresponding to the present Gūma tract, cf. *Ancient Khotan*, i. pp. 97, 103.

[11] See Chavannes, *Turcs occid.*, p. 125.

[11a] See Joyce, Appendix *C*.

[12] See *Desert Cathay*, ii. pp. 442–82, also Map II and Panoramas XII, XIII. The details of the surveys made are to be found in Maps Nos. 22, 28, 29, 32, 33.

quence, whether in peace or war. The difficulties presented by the precipitous rock slopes of the deep-cut gorges, through which the watershed of the range is gained from the north, are exceptionally great and make portions of the route practically impossible for laden animals. A still more serious obstacle to the use of the route for trade or military movements is the utter barrenness of the wide plateaus and valleys, lying at elevations of over 16,000–17,000 feet, which have to be crossed for weeks before the nearest habitable ground on the Ladāk side of the Lanak-lā can be reached. For a considerable number of marches there is practically no grazing of any sort, while the use of camels, which might meet this serious difficulty as it largely does on the Kara-koram route, is rendered impossible by the nature of the Pōlur gorges. It was for this reason that when Habīb-ullah, the rebel 'king' of Khotan during 1863–6, endeavoured to open up a line of communication with Ladāk and India safe from his enemies' interference, his efforts had to be directed, as we shall see presently, towards the shorter route through Karanghu-tāgh and across the high glacier pass of the Yangi-dawān, in spite of even more formidable physical obstacles.

Barrenness of high plateaus beyond.

Gold pits of *Zailik*.

In my Personal Narrative I have related how a fortunate chance, the encounter with a hunter of wild yaks, less secretive than the wily people of Pōlur, enabled me, for our expedition to the glacier headwaters of the Yurung-kāsh, to choose a track which led to the discovery of extensive gold pits in the high valley of Zailik (Maps Nos. 29. D. 1; 33. A. 1). There is every reason to believe that the gold-bearing layers of conglomerate overlying the gneiss in the bed of this tributary stream and in the neighbouring portion of the Yurung-kāsh gorge itself, at elevations from 13,000 to 14,500 feet, have been worked for ages. But the hundreds of abandoned pits, often walled up to serve as graves for those poor wretches who had toiled here under all the hardships of a semi-arctic climate and practical slavery, could not tell their story. The output now is greatly reduced. But much of the gold the lavish use of which in gilding Khotan temples was noted long ago by Fa-hsien, and is still attested by the Yōtkan strata,[13] may well have come from these gorges; certain it is that they are as forbidding as any of the desolate places to which *auri sacra fames* has ever led men.

Glacier sources of Yurung-kāsh River.

It was solely with the help of the human beasts of burden obtained from among the four dozens or so of poor miners who are still brought to Zailik for the few summer months of this gloomy ravine that we were able to penetrate by eight trying marches to the great glacier-girt basin where the easternmost and largest branch of the Yurung-kāsh takes its rise. The tracks we followed across precipitous side spurs and through almost impassable river gorges were those of wild yaks. By climbing to heights between 18,000 and 19,000 feet for survey work, grand panoramic views were obtained of this wonderful mountain region: human eyes are not likely to have ever rested before upon them. Thus we traced the great river to its ice-bound head. It was of geographical and also of quasi-antiquarian interest to find there evidence that the glaciers had in a relatively modern period still spread over many square miles of what is now a huge rolling plateau covered with glacier-mud and detritus (Map No. 33. B, C. 2). That the recession within historical times of all these glacier feeders of the Yurung-kāsh and of the more easterly K'un-lun rivers also must have directly affected the fate of old settlements now abandoned to the desert, such as Dandān-oilik and the Niya Site, appears very probable.

Elevated plateaus south of K'un-lun.

By September 3 easier ground was regained near the Ulūgh-köl lake (Map No. 33. C. 2), where a depot of spare transport and supplies awaited us. Then we marched, much hampered by a succession of snow-storms, along the Pōlur–Lanak-lā route to the broad basin, about 17,200 feet above sea, where the Keriya River rises at the foot of a line of great glaciers (Map No. 33. C. 3). They proved to descend the eastern slopes of the same ice-clad range which encircles the easternmost Yurung-kāsh

[13] Cf. *Ancient Khotan*, i. p. 194.

sources. After leaving behind the watershed of the Keriya River at an elevation of close on 18,000 feet, we turned westwards for the exploration of the ground which figured generally in atlases as a high plain with the name of 'Ak-sai-chin', but which the latest trans-frontier map of the Survey of India rightly showed as a blank. Instead of a plain we found there high snow-covered spurs crowned by peaks up to more than 23,000 feet, and between them broad barren valleys, descending from the great range which overlooks the Yurung-kāsh headwaters from the south (Maps Nos. 22, 29, 33). At the debouchure of these valleys there extends a series of large isolated basins, all at an elevation between 15,000 and 16,000 feet, holding lakes mostly dry. It was fortunate that easy saddles leading over completely decomposed cross spurs facilitated progress over this dismal ground; for owing to its utter barrenness, which after the first lake (Map No. 29. D. 4) was passed left no longer even a pretence of grazing, our ponies and donkeys, in spite of all care, succumbed here in rapid succession.

Salt-encrusted dry basins.

After a week of long marches from where we had left the track to the Lanak-lā a large salt lake was reached which had been sighted from afar more than forty years before by a triangulation party of the Survey of India, but which had now dried up for the most part (Map No. 22. D. 4). Its approximate position was shown in the sketch-map intended to illustrate the route followed by Mr. W. J. Johnson on his adventurous journey from Ladāk to Khotan in 1865. This prepared me to look out for that old route, and after three more marches to the north-west across absolutely sterile basins, holding salt-encrusted dry lagoons and without animal or plant life of any sort, we struck its traces to my great relief (Map No. 22. B. 3). Two small stone-heaps, half-buried under coarse sand and gravel, found at the mouth of a valley leading northward, were the first trace left by human hands since we had crossed the Bābā-Hātim Pass to the Keriya River sources a fortnight earlier.

Relics of Johnson's route.

The survival almost intact of these rough little cairns, of stacks of dead 'Burtse' roots found higher up the valley, and of some other small relics left behind by those who followed this route during the few years (1864–6) it was open, was characteristic of the dryness of the climate even at this great elevation. To find them in perfect preservation seemed striking proof how little of human presence the desolate high plateaus just traversed of the extreme north-west of Tibet could have seen ever since history began.

Eastern headwaters of Kara-kāsh River.

The track still perfectly well defined in most places, though not trodden by man for over forty years, led to the pass which in Johnson's sketch-map was shown as 'Khitai-dawān', and by the evening of September 18 we emerged at last in the valley of the eastern feeder of the Kara-kāsh. There a shelter roughly built with unhewn stones marked the 'Ḥājī-langar' (Map No. 22. B. 1) of which Satip-āldi Bēg, the old headman of the Kirghiz in the upper Kara-kāsh Valley, had told me as having been built by Ḥājī Habīb-ullah's order, when this ill-fated rebel ruler of Khotan (1863–6) opened his own route across the high K'un-lun Range south of Karanghu-tāgh to Ladāk. Two days later I was joined lower down in the Kara-kāsh Valley by a party of Satip-āldi Bēg's Kirghiz with the supplies and transport arranged for from Khotan. So the difficult expedition through the K'un-lun ranges seemed now successfully ended.

Search for Johnson's *Yangi-dawān*.

But there still remained one exploratory task, all the more tempting to me because it offered also a quasi-historical interest. It was to trace Ḥājī Habīb-ullah's route up to the point where it crossed the main K'un-lun Range above Karanghu-tāgh by a high glacier pass, and thus to determine the exact position of the 'Yangi-dawān' of Johnson which our surveys of 1900 and 1906, carried out from the opposite side, had failed to reveal.[14] For this purpose I marched back with the Kirghiz and their yaks to below Ḥājī-langar, where a line of cairns that obviously continued the one found

[14] Cf. *Ruins of Khotan*, pp. 202, 214; *Desert Cathay*, i. pp. 197 sqq.

across and from Johnson's 'Khitai-dawān' had been noticed by me before, running up a side valley northward (Map No. 22. B. 1). The route could be traced quite clearly up to about 7 miles from its debouchure; beyond this its traces had become completely obliterated by fallen masses of snow and rock-débris. A short distance further up the valley narrowed and branched into two steep ravines, one coming from a glacier visible to the north, the other from a snow-filled side valley towards the east. There was nothing to indicate on which side the approach to the pass lay. Yet an attempt to reach the watershed was imperative in any case for finally linking up our surveys.

Ascent to snowy col on K'un-lun watershed.

Reasons explained in my Personal Narrative induced me to make the ascent on September 22 by the glacier northward, accompanied by R. B. Lāl Singh and some Kirghiz. The climb proved very trying owing to the much-crevassed condition of the ice and, higher up on the névé beds, to the softness of the snow. Thus it was not until after ten hours of exhausting toil that the crest was gained, at a height of close on 20,000 feet. It proved to lie just below the shoulder of a great snowy peak, for which triangulation had shown the height of 23,071 feet. I had realized before that this difficult glacier climb could not lead to a pass practicable in modern times. But there was ample reward in the exceptional opportunity which the magnificent views, opening on both sides of the range from this commanding height,[15] offered for our survey work. The time remaining for it was short and did not allow me to give adequate thought to the body after the exhausting fatigues. Mapping and photographic work was done in bitter cold, the thermometer showing 16° F. below freezing-point at 4 p.m. with the sun shining. The descent had to be made without the chance of a halt, from fear of getting benighted on the glacier, and when late in the evening camp was reached, I found that my feet had been severely injured by frost-bite. This day of hard-achieved success had brought for me long suffering; but there was the satisfaction of knowing that it had also seen the last of our exploratory tasks accomplished.

Feet injured by frost-bite.

Section III.—OVER THE KARA-KORAM TO ENGLAND

Serious results of accident.

Severe pains in my frozen feet left no doubt about the serious results of this accident and the urgency of surgical help. Unable to use my feet or even to sit in the saddle, I had myself carried down the Kara-kāsh valley as well as I could in an improvised litter. Reaching Portash after four days of dolorous progress, I had the relief of finding there my heavy caravan of antiques safely arrived across the Sanju Pass. Arrangements for their further transport, the settling of accounts with the Kirghiz and the Khotan 'Kirakash' who had shared our expedition in the K'un-lun, and the discharge of old followers kept me hard at work on my camp bed for two days. The valuable convoy was left in charge of R. B. Lāl Singh, who with self-sacrificing devotion never failed to share and lighten my burdens.

Kara-koram Pass crossed in litter.

Recognizing that gangrene had begun in the toes of my right foot and apprehending that it might spread further, I was anxious to move ahead towards Leh as rapidly as possible. Setting out on September 30 from the Kara-kāsh Valley with the lightest possible baggage, I had myself carried by forced marches along the Kara-koram trade route. Its unending line of skeletons of transport animals bore sad witness to the inclement physical conditions on these terribly bleak uplands. On October 3 my sorry little caravan crossed the Kara-koram Pass, 18,687 feet above sea, and where after the next march the rocks of the Murghe defile made further progress on ponies impossible for my improvised litter, I was fortunately met by a band of hardy Tibetan coolies. Without this timely help which Captain (now Major) D. G. Oliver, British Joint Commissioner in

[15] The Panorama XII reproduced in *Desert Cathay*, vol ii, offers some record of them.

Ladāk, had provided, I could never have got myself carried over the difficult ground ahead and across the troublesome Sasser glacier.

Arrival and operation at Leh.

It was a great relief when after nine trying days of travel I was met at the highest Ladāk village on the Nubra River by the Rev. S. Schmitt, in charge of the Moravian Mission Hospital at Leh. Suffering himself from the after-effects of a severe illness, he had with kindest self-sacrifice hurried up across the high Khardong Pass to bring help. Owing to my exhausted condition, due largely to the exertions and hardships which had preceded the accident and, no doubt, predisposed me for it, he was obliged to postpone the operation needed by my right foot until after we reached Leh on October 12. There all its toes had to be amputated. His kindness and that of his fellow missionaries provided me with much-needed comforts. But nearly three weeks passed before I was considered strong enough to face the fatigues of the fortnight's continuous travel down to Kashmīr. The wounds left after the amputation were very painful, and healed only with extreme slowness. So another long halt was imposed at Srīnagar by the advice of my old friend, Dr. A. Neve, the distinguished surgeon and mountaineer; but this was made quite refreshing by the hospitality and attention I enjoyed on the part of the Assistant Residents, Captains D. G. Oliver and A. D. Macpherson. Help received in the ever-cherished surroundings of Kashmīr facilitated my multifarious labours.

To Lahore, Dehra Dun, Calcutta.

At last I could begin my first attempts at walking with crutches, and by December 1 start on my way down to India. My wounds were still giving trouble. So the rest and care enjoyed at Lahore under the hospitable roof of my old Punjab friend Sir Edward Maclagan was a great boon, easing much work that final settlement of official accounts and the like still called for. On my way to Calcutta, where the need of various official interviews and a kind invitation from another old friend, Colonel Sir James Dunlop Smith, Private Secretary to H. E. the Viceroy, called me, I paid a flying visit to Dehra Dun. There the friendly help of Colonel (now Sir Sidney) Burrard, then Superintendent of the Trigonometrical Survey of India, enabled me to make adequate arrangements for the publication of our topographical surveys. During my few days' stay at Calcutta Lord Minto gave fresh proof of the encouraging personal interest with which he had followed my travels, and of his benevolent thought for my Indian assistants. It was due to Lord Minto's personal interposition that poor Naik Rām Singh's claims were promptly met by the award of the special pension already referred to. Rai Lāl Singh, who under exceptional hardships had displayed devoted zeal and energy such as I had never seen equalled by any Indian, received richly earned official recognition by the award of the title of Rai Bahādur in the Honours List of the New Year, 1909, as well as departmental promotion. To Surveyor Rai Rām Singh the Royal Geographical Society had before awarded a valuable prize in acknowledgement of his services on successive expeditions. Through the kind attention of the Hon. Sir Harcourt Butler, then at the head of the Indian Foreign Office, Chiang Ssŭ-yeh, my excellent Chinese Secretary, was presented with a valuable gold watch as a special mark of the Indian Government's gratitude.

Return to Europe.

On the day after Christmas, 1908, I was at last able to take ship at Bombay for Europe. Under the influence of the much-needed rest assured by the voyage the last of the wounds healed, and when I set foot for a brief halt in the city of Marco Polo, a short walk had just become possible without pain. On January 20, 1909, I reached London, and there had the great satisfaction of learning that all my cases with antiques had a few days before safely arrived at the British Museum.

Fresh labours and their conclusion.

I knew well that the return from a long journey like mine could not mean rest, but only the prelude to labours in some respects more arduous and important than the work in the field. But fortunately encouragement from different sides enabled me to face them with good hope. On

the recommendation of the Government of India H.M.'s Secretary of State for India agreed to sanction the proposals which were to secure me a period of deputation on special duty sufficient for the arrangement of my Collection and for the first elaboration of the results of my expedition. The preliminary account I was able to give of them before the Royal Geographical Society was followed within two months of my return by the award of its Founder's Gold Medal for the geographical work accomplished. And last but not least, there was gratifying assurance that tried friends and collaborators among the most competent scholars were willing to help me with the tasks which, as far as it lay in me, have now been brought to an end.

FINIS

APPENDIX A

CHINESE INSCRIPTIONS AND RECORDS

TRANSLATED AND ANNOTATED

BY

ÉDOUARD CHAVANNES

MEMBRE DE L'INSTITUT, PROFESSEUR AU COLLÈGE DE FRANCE, ETC., ETC.

I

Transcript of text and annotated translation of Chinese documents found by Mr. Tachibana at the Lou-lan Site.

[NOTE.—Transcript, translation, and notes were first received with a letter of M. Chavannes, dated October 6, 1910, having been prepared from a photograph of the originals which Count Otani had presented to me on behalf of the discoverer. Transcript and annotated translation are reproduced here as revised by M. Chavannes in April, 1913, together with a supplementary note then furnished. For the probable provenance of the documents and the historical import of the draft letter of the Chang-shih Li Po found in the complete one, cf. above, pp. 377, 409.—A. STEIN.]

Premier fragment :

五 月 七 日 西 域 長 史 關 內
侯 李 柏 五 . . . . .

Deuxième fragment :

五 月 七 日 ○ 鎭 西 域 長 史 關* 內*
侯 李 柏 頓 首 頓 首 別 ○ ○ ○
恆 不 去 心 今 奉 臺 使 來 西† 月
二 日 到 此 未 知 王 消 息 想 國 中
平 安 王 使 迴 覆 羅 從 北 虜
中 與 嚴 參 事 往 想 是 到 也
今 遣 使 苻 大 往 相 聞 通
知 消 息 書 不 盡 意 李 柏 頓 首 頓
首

† Mr. Hopkins suggests that the character which appears here as 西 '*hsi*, 'west', was in the original document meant for 四 *ssŭ*, 'fourth'.

Premier fragment, qui paraît avoir appartenu à l'enveloppe de la lettre ci-après:

'Le septième jour du cinquième mois, le *tchang-che* des pays d'Occident, ayant le titre nobiliaire de Kouan nei heou, *Li Po*[1] . . .'

La lettre elle-même est complète et est ainsi conçue:

'Le septième jour du cinquième mois, moi, *Li Po*, *tchang-che* pacificateur (?) et stabilisateur des contrées d'occident, je me prosterne à deux reprises. (Depuis que je me suis séparé de vous, votre souvenir[2]) ne s'est jamais éloigné de mon cœur. Maintenant, ayant reçu le titre de délégué impérial, je suis venu dans l'ouest; le deuxième jour du (présent)[2a] mois, je suis arrivé ici;[3] je n'ai point encore appris de nouvelles de vous, ô roi; je pense que dans votre royaume tout est tranquille. L'envoyé de Votre Majesté est retourné à *Fou-lo*;[4] il a passé par le pays des barbares du Nord et il est parti en compagnie du *ts'an-che Yen*;[5] je pense qu'il est arrivé. Maintenant, je charge l'envoyé *Fou-ta* [?] de se rendre auprès de vous pour vous informer de cela et pour prendre de vos nouvelles. Cette lettre ne peut exprimer toute ma pensée. Moi, *Li Po*, je me prosterne à deux reprises.'

[**Supplementary note received with M. Chavannes' letter of April 17, 1913.**]

La lettre de Li Po a été publiée en fac-similé par M. Haneda dans un article de *Tōyō gakuhō* (vol. I, fasc. 2, p. 53). D'autre part, M. Naitō a publié dans le *Ōsaka Asahi Shimbun* des notes sur les découvertes de M. Tachibana. M. Péri a publié dans le *B.É.F.E.O.*, x, pp. 651–54 une excellente analyse de ces notes. Après avoir donné, d'après M. Naitō, la transcription du brouillon de lettre de Li Po, qui, paraît-il, existe en deux exemplaires, il ajoute:

'Dans plusieurs fragments trouvés avec ces brouillons, on lit les expressions: 臣柏言焉耆王龍; 達海頭; 逆賊趙. Cela permet de conjecturer que cette lettre fut adressée au roi de Yen-k'i 焉耆王, c'est-à-dire au roi Long-hi 龍熙 qui gouvernait la région actuelle de Karachar. On y trouve aussi le nom de Tchao Tchen 趙貞 (ou 趙貭) qui aurait été son adversaire et aurait combattu contre lui. Tous les manuscrits ont été recueillis sur les bords du Konte-daria, affluent du Tarim qui se jette dans le Lobnor, l'ancien P'ou-tch'ang hai. Le hai t'eou 海頭 dont il est question dans un fragment, désigne-t-il le Lobnor, ou le Bakrakh koul, lac voisin de Karachar? Rien ne permet encore de le décider . . .'

II

Translation of an itinerary from Sha-chou to Khotan, extracted from T'ang shu, Chap. XLIII b, p. 15 obv.

[NOTE.—The translation of this itinerary was communicated to me by M. Chavannes with his letter of April 17, 1913. Portions of it were published by M. Chavannes, *Voyage de Song Yun*, p. 13 (*B.É.F.E.O.*, iii, p. 391, note 9), and by M. Pelliot, *J. Asiat.*, 1916, viii, pp. 116 sqq. In view of the importance of the itinerary it appears desirable to reproduce here M. Chavannes' complete translation. I have added in footnotes references to pages in which particular sections of it have been discussed by me in the present work or before.—A. STEIN.]

[1] Ce *Li Po* est mentionné dans la *Tsin chou* (chap. LXXXVI, p. 7 r°), qui nous apprend qu'il avait le titre de *tchang-che* des pays d'Occident en l'année 324 p.C. (cf. Stein, *Ancient Khotan*, i. p. 538). Cette indication nous permet donc de dater approximativement la lettre de *Li Po* que nous avons ici.

[2] Ce membre de phrase est rétabli par hypothèse, car il y a trois mots complètement illisibles. Il est probable que *Li Po* était déjà venu une première fois dans les pays d'Occident comme officier subalterne, et qu'il avait fait alors la connaissance du roi de . . .; maintenant, il revient de nouveau en qualité cette fois de *tchang-che* des pays d'Occident, et, cinq jours après son arrivée, il écrit au roi de . . . pour lui rappeler leurs anciennes relations.

[2a] [See note at foot of preceding page.]

[3] M. Tachibana lit 到此 'je suis arrivé ici'. Je lirais plutôt 到戍 'je suis arrivé à l'endroit où est cantonnée la garnison chinoise'. A droite du mot qui donne lieu à cette divergence de lectures, on discerne deux mots dont le second paraît être 頭 '*t'eou*'; peut-être était-ce le nom même de l'endroit où se trouvait *Li Po*; il est donc regrettable qu'on ne puisse lire avec certitude ces deux mots, qui auraient pu nous apprendre le nom de la localité où résidait le *tchang-che* des pays d'Occident.

[4] C'est hypothétiquement que je considère les mots *Fou-lo* comme désignant un nom de lieu.

[5] Un officier chinois.

'Voici encore une route : partant de la sous-préfecture de Cheou-tch'ang (qui est la ville) de l'arrondissement de Cha 沙州壽昌縣, on arrive au bout de 10 li dans la direction de l'ouest à l'ancien rempart de la passe Yang 陽關故城.[1] Continuant vers l'ouest, on arrive au bout de 1,000 li au rivage méridional du P'ou-tch'ang hai 蒲昌海 (Lop nor). Partant du rivage sud du P'ou-tch'ang hai et allant vers l'ouest, on arrive à la ville de Ts'i-t'ouen 七屯城 (la ville des sept colonies militaires) ; c'est la ville de Yi-sieou 伊修城 de l'époque des Han.[2] 80 li plus à l'ouest, on arrive à la garnison de Che tch'eng 石城鎮 (la ville de pierre),[3] qui n'est autre que le royaume de Leou-lan 樓蘭 de l'époque des Han ; on l'appelle aussi Chan-chan 鄯善 ; elle est à 300 li au sud du P'ou-tch'ang hai. C'est l'endroit où K'ang Yen-tien 康豔典 fut commissaire de la garnison, et, en cette qualité, entra en communications avec les pays d'occident. 200 li plus à l'ouest, on arrive à Sin-tch'eng 新城, qu'on appelle aussi ville de Nou-tche 弩支城 ;[4] elle a été construite par (K'ang) Yen-tien. Plus à l'ouest, on passe par le puits T'ö-lei 特勒井 (le puits du tegin)[5] et on traverse la rivière Tsiu-mo 且末 ; 500 li plus loin on arrive à la garnison de Po-sien 播仙鎮 (garnison du ṛsi banni) qui est l'ancienne ville de Tsiu-mo 且末 ;[6] c'est Kao tsong, qui pendant la période chang-yuan (760–761) en changea le nom. Plus à l'ouest, on passe par le puits Si-li-tche 悉利支井, par le puits Yao 祆井, par la rivière Wou-tchö 勿遮水. Au bout de 500 li (on arrive) au poste militaire de la ville de Lan 蘭城守捉, qui est à l'est de Yu-t'ien 于闐 ;[7] plus à l'ouest on passe par le fortin de Yi-tou 移杜堡, par le fortin de P'ong-houai 彭懷堡, par le poste militaire de la ville de Ts'eu 次城守捉, et, au bout de 300 li, on arrive à Yu-t'ien 于闐.'

III

Text and annotated translation of Chinese inscription dated A.D. 851 from walled-up chapel of cave-temple Ch. I at Ch'ien-fo-tung.

[NOTE.—A rubbing taken from the inscription has been reproduced in Pl. CLXXV, and a transcript prepared by Chiang Ssŭ-yeh is shown in Fig. 345. Regarding the original position and historical interest of the inscription, cf. above, pp. 808 sq., 816 sq.—A. STEIN.]

PREMIER REGISTRE.[1]

. . . brevet ; en se conformant au texte on l'a gravé sur pierre dans l'espérance qu'on fera ainsi que pendant des myriades d'années et des milliers d'automnes il ne s'altérera pas et ne se détruira pas.

Édit impérial : Hong-jen,[2] qui est directeur général des moines pour la religion bouddhique dans le Ho-si, et qui exerce les fonctions de chef de la religion à Cha-tcheou pour les trois sciences qui sont le gouvernement des moines, la doctrine et la discipline, a envoyé à la cour des émissaires qui sont le çramaṇa de Cha-tcheou, maître général de la Loi pour la science des significations, Wou-tchen et ses collègues. J'ai appris que leurs ancêtres sont sortis de Chine ; récemment, parce qu on s'est trouvé à une époque de démembrement, ils sont tombés parmi les peuples qui tressent leurs cheveux en nattes ;[3] ils sont donc nés personnellement dans le territoire des (barbares) Jong ; mais ils ont fait passer leurs sentiments au bouddhisme et ils ont pu, au moyen de la doctrine souveraine du Vide, changer les cœurs de ces (hommes de) race étrangère ; leur esprit irascible et violent a été entièrement supprimé ; le loyalisme et la droiture ont été suscités ; ils respectent les ordonnances de la Loi ; jour et nuit, ils pratiquent la bonne conduite ; parfois ils s'inclinent vers la cour céleste et déjà ils ont participé de sa voie de sagesse ; parfois ils envoient des ambassadeurs au palais impérial et soudain sortent de leurs passages d'égarement. Les cœurs (de ces religieux) méritent d'être loués ; leurs actes se sont donnés beaucoup de peine ; il convient de payer de retour leur conduite fidèle et juste et d'encourager en quelque mesure par des récompenses leurs efforts dans la route de la sagesse, de leur donner le titre de 'celui qui assiste aux autels au

[1] See above, pp. 620 sqq. [2] Cf. above, pp. 327, 342 sq.
[3] See above, pp. 320 sq. [4] See above, pp. 306, 320.
[5] Cf. above, p. 306.
[6] See above, pp. 298 sq., with note 34[a], concerning the correct date, which is A.D. 674–676.
[7] Cf. *Ancient Khotan*, i. p. 436, with note 14 ; but see also *ib.* i. p. 522, note 5.

[1] L'inscription est divisée en trois registres ; le registre supérieur reproduit l'édit impérial adressé sous forme impersonnelle aux fonctionnaires chargés de le faire exécuter ; le second registre contient l'édit impérial adressé sous forme personnelle au moine Hong-jen ; le troisième registre renferme la liste des cadeaux envoyés par l'empereur à ce religieux.
[2] J'adopte la lecture à laquelle s'est arrêté, hypothétiquement d'ailleurs, M. Pelliot (*B.É.F.E.O.*, viii. p. 503).
[3] Les peuplades tibétaines.

dedans et au dehors', de leur accorder le nom de 'homme de grande vertu de la Chine' et en outre de les glorifier par un vêtement violet afin qu'ils resplendissent parmi les costumes noirs des barbares Jong. Hong-jen est nommé homme de grande vertu (bhadanta) chargé des offrandes, assistant aux autels au dedans et au dehors de la capitale;[1] Wou-tchen est nommé homme de grande vertu assistant aux autels de la capitale. En outre, à tous deux j'accorde le vêtement violet: pour le reste, on se conformera en tout point aux précédents.

La cinquième année ta-tchong, le vingt et unième jour du cinquième mois (23 juin 851).

(Suit une ligne de petits caractères peu lisibles où sont inscrits les noms et les titres de divers fonctionnaires du Tchong-chou, c'est-à-dire de la chancellerie impériale.)

Nous avons reçu l'édit impérial précité; dès qu'il est arrivé, nous l'avons mis à exécution. — La cinquième année ta-tchong, le . . . . . jour du cinquième mois.

(Deux lignes en petits caractères peu lisibles contenant des noms des fonctionnaires.)

Hong-jen, ayant les titres de homme de grande vertu chargé des offrandes, assistant aux autels au dedans et au dehors de la capitale, en même temps directeur général des moines pour la religion bouddhique dans le Ho-si, exerçant les fonctions de chef de la religion à Cha-tcheou pour les trois sciences qui sont le gouvernement des moines, la doctrine et la discipline, gratifié du vêtement violet, a reçu l'édit impérial précité; dès l'arrivée, il l'a mis à exécution.

La cinquième année ta-tchong, le . . . . . jour du cinquième mois. Fin.

(Une ligne en petits caractères peu lisibles renfermant des noms de fonctionnaires.)

Deuxième Registre.

Avec respect nous avons reçu l'édit impérial suivant: ô maître Hong-jen, nous avons entièrement pris connaissance de l'affaire que nous a exposée dans sa requête votre disciple que vous nous avez envoyé, le religieux Wou-tchen. Vous êtes, ô maître, un excellent enfant de la Chine et un modèle de la discipline pour la contrée occidentale. Vous tenez une conduite pure et vous n'avez pas perdu la perle des défenses; vous dirigez (les hommes) d'une manière harmonieuse et vous conservez au plus profond de votre être l'épée de l'intelligence. Vous continuez au loin à chérir votre ancienne patrie et vous souhaitez la soumettre à l'influence impériale. Vous avez envoyé spécialement un religieux pour m'exposer votre désir intense. Maintenant vous avez fait pénétrer des nouvelles authentiques dans votre pays d'origine et vous avez exprimé les sujets de mécontentement profond de votre grand-père et de votre père; vous êtes uniquement inspiré par la piété filiale et par le loyalisme; on peut-dire que vous réunissez deux vertus admirables. Il faut que vous preniez la direction du parti de ceux qui sont attachés aux T'ang et en définitive vous ferez aboutir les sentiments qui désirent le retour à l'influence transformatrice (de l'empereur). Efforcez-vous de suivre vos beaux projets afin de mener à bien votre glorieuse entreprise magnifique. Maintenant, ô maître, je vous confère le titre d'assistant aux autels au dedans et au dehors de la capitale, chargé de faire les offrandes, homme de grande vertu; je vous accorde en outre un vêtement violet; comme précédemment, vous serez directeur général des moines pour la religion bouddhique dans le Ho-si; vous exercerez les fonctions de chef de la religion à Cha-tcheou pour les trois sciences qui sont le gouvernement des moines, la doctrine et la discipline. Je vous délivre en même temps un diplôme officiel. — Pour ce qui est du religieux Wou-tchen, je lui confère aussi le titre d'assistant aux autels de la capitale, homme de grande vertu, et je lui accorde en outre un vêtement violet. Je lui donne en même temps un diplôme officiel. Je vous récompense par ces faveurs, afin d'encourager votre loyalisme et vos efforts; il faut que vous alliez jusqu'au bout de votre sincérité absolue afin de répondre à ce traitement extraordinaire. Ô maîtres, dans l'exposé

[1] Ce titre désigne les religieux qui étaient admis à présider sur l'autel où se pratiquait l'ordination des moines; cf. Trip. Tôkyô, xxxv. 5, 346: 臨壇度僧尼八千餘人 'assistant sur l'autel il conféra l'ordination à plus de huit mille religieux et religieuses.' C'est à l'expression 'au dedans et au dehors de la capitale' que paraît correspondre celle de 兩街 'les deux rues' que nous trouvons dans le titre 兩街臨壇大德 'bhadanta assistant aux autels pour les deux rues' (Trip. Tôkyô, xxxv. 9, p. 8ᵃ), ou encore: 臨壇兩街十望大德內供奉 'assistant aux autels, bhadanta pour les deux rues et les dix directions, faisant les offrandes pour le palais' (*ibid.*, xxxv. 5, p. 30ᵃ). Un titre analogue existait chez les Tibétains; une inscription de 864 nous apprend que le btsanpo tibétain conféra à un religieux de Cha-tcheou le titre de 臨壇供奉 'assistant aux autels, faisant les offrandes' (cf. Chavannes, *Dix inscriptions de l'Asie centrale*, p. 85 du tirage à part).

當家告身依本鎸石庶使萬歲千秋不朽不壞矣
勅釋門河西都僧統攝沙州僧政法律三學教主洪䛒
入朝使沙州釋門義學都法師悟真等蓋聞其先出自
中土頃因及瓜之代陷為辮髮之宗爾等誕質戎壃栖
心釋氏能以空王之法革其異類之心獷悍皆除忠貞
是激虔恭教旨夙夜修行或傾向天朝巴[1]分其覺路或奉使
魏闕頓出其迷津心惟可嘉跡頗勞止宜酬節義之効
或奬道途之勤假內外臨壇之名錫中華大德之號仍
榮紫服以耀戎緇洪䛒可京城內外臨壇供奉大德
悟真可京城臨壇大德仍並賜紫餘各如故

大中五年五月廿一日

中書令闕　中書侍郎兼吏部尚書平章事。。龜從僧當平中書令。宣崔瑑行
奉勅如右。到奉行　大中五年五月　日
侍中。　右侍郎兼　侍郎平章事。　給事中侍　日月時都事丘。郎中
禮部尚書　禮部侍郎懿　尚書左丞瑑
告京城內外臨壇供奉大德兼釋門河西都僧統攝沙州僧政法
律三學教主賜紫洪䛒奉　勅如右苻[2]到奉行
郎中　主事　令史鄭全琫　中書令史
大中五年五月　日下

(2) i.e. 符

(1) Ch. 心 = 心

。。奉
勅洪䛒師所遣弟子僧悟真上表事具悉
師中華良裔西土律儀修行而不失戒珠
調御而深藏慧劒而又遠懷故國願被皇
風專遣僧徒備申懇切今則達鄉閭之的
信擄祖父之沉冤惟孝與忠斯謂兼美宜
率思唐之侶終成歸化之心勉遵令圖以
就休烈今授師京城內外臨壇供奉大德
仍賜紫衣依前充河西釋門都僧統知沙
州僧政法律三學教主兼賜勅牒僧悟真
亦授京城臨壇大德仍賜紫衣兼給勅。[3]
錫茲寵渥慰尓忠勤當竭素誠用荅殊遇
師等所上陳情表請依往日風俗大行佛
法者朕精心釋教否捨修持師所陳論深
愜本意允依來奏其崇恩等師。[4]並存問
之今賜師及崇恩等五人少亻物其餘[5]別錄並
師家書迴報並賜往至宜領之餘另具所賜議瀨
勅書需。[6]想當知悉夏熱師。好否遣書指不多及
一日

(6) Ch. 分　(5) Ch. 如　(4) Ch. 宜　(3) Ch. 牒

勅賜衣物錄本
賜內外臨壇大德
河西都僧統賜紫
僧洪䛒物四十疋
錦二疋
色吳綾二疋
色小綾二疋
色絹八疋
雜綃。。。
紫。。六疋
綾僧衣
內一綿
大散梳二

345.—TRANSCRIPT OF INSCRIPTION, DATED A.D. 851, FROM WALLED-UP CHAPEL, CH'IEN-FO-TUNG, PREPARED BY MR. CHIANG HSIAO-YÜAN 蔣孝琬 (CHIANG SSŬ-YEH).

Ch. marks readings proposed by M. Chavannes.

que vous m'avez fait de vos dispositions en ce qui concerne la demande que vous m'avez adressée de faire pratiquer grandement, suivant l'usage d'autrefois, la doctrine bouddhique, (je puis vous dire que) moi-même je suis attaché de tout cœur à la religion bouddhique et je me garde d'en négliger la pratique constante ; ce que vous me racontez satisfait profondément mes propres idées ; je donne mon approbation à votre requête. Quant aux maîtres qui sont Tch'ong-ngen et autres, il convient de leur souhaiter à tous le bonjour. Maintenant, je vous donne, ô maître, ainsi qu'aux cinq personnes qui sont Tch'ong-ngen et autres, quelques menus cadeaux qui sont énumérés dans une liste à part ; en même temps la réponse que vous aviez écrite, ô maître, à une lettre de votre famille, j'ai bien voulu la faire parvenir à destination ; le reste des mesures qu'il fallait prendre en outre, je les ai toutes prises. Quant aux décisions qui sont dans le décret accordé par moi à (Tchang) Yi-tch'ao,[5] j'estime qu'il faut que vous en preniez connaissance. Je ne sais, ô maître, si vous supportez bien les chaleurs de l'été. Je vous envoie cette lettre sans avoir pu vous exprimer tout ce que j'avais à vous dire.

Troisième Registre.

(Liste des cadeaux accordés par l'empereur à Hong-jen ; ce sont principalement des pièces de soie et des vêtements.)

Observations.

Après avoir été au pouvoir des Tibétains pendant cent vingt ans, le territoire dont Cha-tcheou était le centre administratif avait fait en l'an 850 retour à la Chine, grâce au gouverneur Tchang Yi-tch'ao qui s'était décidé à se soumettre à l'empereur. Les moines bouddhiques d'origine chinoise qui résidaient à Cha-tcheou avaient été les principaux agents de cette évolution politique ; c'est ce que reconnaît officiellement le gouvernement impérial dans le décret du 23 juin 851 que nous a conservé l'inscription relevée par Sir Aurel Stein ; ce décret en effet confère des distinctions exceptionnelles au chef des moines de Cha-tcheou et au religieux qui avait été envoyé par lui comme émissaire à la cour de Chine ; il les loue de l'action bienfaisante qu'ils ont exercée, par le moyen de la religion bouddhique, sur l'esprit des populations tibétaines, et il les encourage à persévérer dans leur œuvre civilisatrice ; en outre, il fait allusion, en termes d'ailleurs obscurs, à un autre décret qui aurait été accordé à Tchang Yi-tch'ao lui-même, ce qui prouve que les moines étaient étroitement associés aux démarches de la diplomatie.

C'est par une autre inscription érigée en 894 en l'honneur d'un gendre de Tchang Yi-tch'ao que nous avons quelques renseignements complémentaires sur ce personnage.[6] Enfin le rôle de Tchang Yi-tch'ao comme protecteur de la religion bouddhique nous est attesté par un passage de la biographie du religieux Tch'eng-ngen 乘恩 ; ce moine chinois s'était réfugié à Kou-tsang 姑臧 (aujourd'hui sous-préfecture de Wou-wei 武威 dépendant de Leang-tcheou-fou, dans le Kan-sou) vers 755 et y avait composé un commentaire du çastra intitulé *Po fa louen* 百法論 ; plusieurs années après sa mort, ce fut le gouverneur Tchang Yi-tch'ao qui, en 863, se chargea de présenter cet ouvrage à l'empereur.[7]

IV

Transcript and annotated translation of Chinese inscription shown by wall-painting in cave-temple Ch. VIII at Ch'ien-fo-tung.

[Note.—The following annotated translation of the dedicatory inscription painted on the banner which appears above the procession of princely ladies shown by panel xv in cave-temple Ch. VIII at the 'Thousand Buddhas' (see above, pp. 932 sq.) was communicated to me by M. Chavannes in a letter of May 14, 1911. M. Chavannes' translation was made from a photograph I took of the dado portion of the frescoed wall seen in Fig. 217. I have added here a transcript of the inscription as it appears in a copy taken at the time of our visit by Chiang Ssŭ-yeh.

The character left untranscribed in the third line to the right has been read by M. Pelliot (*B.É.F.E.O.*, viii, p. 504) as *lu* 祿. This permits us to recognize, in the husband of the Khotan princess, Ts'ao Yen-lu, whom

[5] Le nom personnel Yi-tch'ao est parfaitement lisible sur l'estampage, mais le mot yi est écrit 議, au lieu de 義 ; en outre, on ne s'explique pas bien pourquoi le nom de famille Tchang a été omis.

[6] Cf. Chavannes, *Dix inscriptions de l'Asie centrale*, p. 80, note 1.

[7] Cf. *Song Kao seng tchouan*, dans Trip. Tôkyô, xxxv. 4, p. 92b.

the notice of the *Sung Annals* extracted by M. Chavannes (see below, p. 1339) names as ruler of Khotan in A.D. 980–1001.—A. STEIN.]

大朝大于闐國天册皇帝
第三女天公主李氏爲新
受太傅曹延○姬供養

L'inscription sur l'oriflamme dans le registre inférieur de la photographie me paraît devoir être traduite comme suit (en lisant de gauche à droite):

'La Princesse céleste, qui a pour nom de famille Li, et qui est la troisième fille du grand souverain, empereur par brevet céleste du grand royaume de Yu-t'ien (Khoten), fait cette offrande parce qu'elle a récemment obtenu de devenir l'épouse du grand précepteur Ts'ao Yen-○.'

Je me borne à remarquer que dans le récit de Kao Kiu-houei (942 p. C.) le roi de Khoten est appelé Li Cheng-t'ien, et a donc bien le nom de famille Li. D'autre part, dans ce même récit (*Wou tai che*, ch. 74, p. 5 r°), on nous dit que les salles du palais du roi de Khoten sont toutes tournées vers l'Est et sont appelées salles du brevet d'or 金册殿; peut-être y a-t-il quelque rapport entre cette désignation et le nom que porte ici le roi de Khoten, 'empereur par brevet céleste' 天册皇帝. Peut-être y a-t-il dans les deux cas une allusion aux brevets accordés par l'empereur de Chine. Enfin, dans le *Wou tai che*, ch. 24, p. 4 r°, il est dit que la femme du Kagan des Ouïgours porte le nom de Princesse céleste 天公主; si la troisième fille du roi de Khoten porte la même dénomination, cela prouve que le titre de Princesse céleste était d'un usage assez fréquent chez les peuples du Turkestan oriental.

V

Annotated translations of Chinese inscriptions on paintings from Ch'ien-fo-tung.

[NOTE.—The following translations and notes were furnished by M. Chavannes in his letters of June 11–16, 1917, to illustrate the materials which he proposed to treat, with the help of M. Petrucci's preceding labours, in the volume of the *Mémoires concernant l'Asie orientale* planned as a joint publication of the two lamented scholars; see above, p. 835.—A. STEIN.]

A

Inscriptions on silk painting Ch. liv. 004 representing the Paradise of Śākyamuni or Amitābha (see above, p. 888; *Thousand Buddhas*, Pl. VI).

Le Ch. liv. 004 a des scènes marginales qui sont les suivantes:

A. Bande de droite, en commençant par le haut; les inscriptions sont ainsi conçues:

1. 'En ce temps, le grand roi de P'o-lo-nai (Vairânasî) avait un grand ministre nommé Lo-leou. [Le grand ministre Lo-leou] conçut dans son cœur des projets pervers.'

2. 'Le grand ministre Lo-leou se disposait à envoyer les quatre sortes de soldats pour aller tuer le fils du roi. (Scène représentant) le moment où un deva dans les airs vient avertir le fils du roi.'

3. 'Alors le roi, sa femme, ainsi que le prince héritier, pour éviter le péril aussitôt partirent et se mirent en route.'

4. 'Le roi et sa femme pensèrent " Nos provisions sont épuisées, maintenant certes où nous réfugierons-nous ? " Le prince-héritier dit au roi : " J'ai la nourriture qu'il faut ; grand roi, dissipez votre anxiété ".'

5. 'Alors le roi, sa femme et le prince-héritier Siu-cho-t'i, se reposèrent à la halte du chemin. Ils pensèrent : " Des deux chemins il n'y en a plus aucun ; nous nous sommes trompés ".'

6. 'Alors le grand roi, voyant que la nourriture était épuisée, aussitôt tira son épée et voulut tuer sa femme. Le prince-héritier, voyant l'attitude extraordinaire du roi, lui saisit la main ; il se coupa lui-même (de la chair de) son corps.'

7. 'Le roi et sa femme, après avoir eu à manger, se mirent en route et s'en allèrent. (Scène représentant) le moment où . . .'

8. Portrait d'une donatrice.

B. Bande de gauche en commençant par le haut ; les inscriptions sont ainsi conçues :

1. 'En ce temps il y avait un royaume nommé P'o-lo-nai ; il y avait une montagne appelée " Lieu où les saints se promènent et résident ". Il y avait un ṛṣi qui demeurait dans la grotte du Sud. (Scène représentant) le moment où le ṛṣi, après avoir suffisamment lavé ses vêtements sur cette pierre, revient à la grotte, sa résidence.'

2. 'Après que le ṛṣi fut parti, une biche vint et, arrivée à cette pierre, elle but le liquide souillé des vêtements ; puis tournant la tête et regardant en arrière, elle se lécha les parties génitales et à la suite de cela devint grosse. Quand les mois furent résolus, cette biche, se tenant sur la pierre d'autrefois, traînant et se tordant de douleur, mit bas une fille.'

3. 'Alors le ṛṣi, entendant les cris plaintifs de la biche, sortit pour aller voir ; il aperçut la fille qu'avait mise bas la biche ; aussitôt, en l'enveloppant d'herbes, (il l'emporta chez lui) ; il recueillit toutes sortes de fruits et la nourrit aux temps voulus.'

4. 'Cette fille grandit et arriva à l'âge de quatorze ans ; son père l'entourait de son affection et l'avait chargée de veiller sur le feu . . . . . " (le ṛṣi) qui demeure dans la grotte du Nord a du feu ; il vous faut y aller pour en prendre." Alors la fille de la biche . . . .'

5. 'Le ṛṣi de la grotte du Nord observa que grâce à la vertu productrice du bonheur de cette fille sous ses pieds poussaient des lotus ; il lui répondit : " Si vous voulez avoir du feu, il vous faut tourner autour de ma grotte en l'ayant à votre droite et en faire sept fois le tour." (Scène représentant) le moment où partout poussent les lotus.'

6. 'Alors Chan-yeou, ayant obtenu la perle précieuse, monta sur une tour élevée et, tenant en mains le brûle-parfums, il fit un vœu. Par la vertu éminente de la perle, sur toute l'étendue du Jambudvīpa, il y eut une pluie de sept joyaux. Pour ne dire que l'essentiel, tout se trouva fourni en abondance.'

7. 'Les vingt mille femmes du roi de P'o-lo-nai n'avaient aucun fils. Il adressa des prières et des sacrifices aux montagnes et aux fleuves. Après que douze années se furent écoulées, la première épouse se trouva enceinte. La seconde épouse elle aussi fut enceinte. A partir du moment où la première épouse fut enceinte, son caractère devint harmonieux et excellent. Les divins, pour lui donner un nom, l'appelèrent Chan-yeou. Quant au prince, qu'avait enfanté la seconde épouse, on l'appela Ngo-yeou.'

8. 'Le prince-héritier Chan-yeou voulut obtenir du roi son père l'exaucement d'un vœu : " Je désire (dit-il) aller sur la grande mer pour y recueillir des joyaux merveilleux." Quand le roi eut entendu cette parole il ne donna point son consentement. Chan-yeou se jeta alors de tout son long par terre, et pendant sept jours il ne mangea pas. Craignant qu'il ne perdît la vie, la première épouse fit des remontrances au roi. Le roi donna aussitôt son assentiment.'

9. 'Portrait d'une donatrice.'

Lorsque Petrucci me communiqua la lecture assez incomplète qu'il avait faite de ces inscriptions, je reconnus dans celles qui se réfèrent aux scènes B. 6, 7, 8 l'histoire de Kalyāṇaṃkara et Pāpaṃkara que j'avais traduite dans le *T'oung pao* d'octobre 1914. L'auteur de la peinture s'était servi du texte indien du *Ta fang pien fo pao ngen king* que j'avais traduit, et les phrases qu'il a écrites sont tirées du texte de ce livre ; par exemple :

B. 6 n'est pas à sa place et devrait être placé à la suite de B. 8 ; l'inscription correspond à *T'oung pao*, 1914, p. 499, l. 12–14, 22–23 ; p. 500, l. 1–3.

B. 7. Cf. *T'oung pao*, 1914, p. 472, l. 6–10 ; p. 473, l. 6–7, 15–16, 28.

B. 8. Cf. *T'oung pao*, 1914, p. 477, l. 29 ; p. 478, l. 1, 18–19 ; p. 479, passim.

J'ai retrouvé de même, dans les scènes A. 1–7, un conte que j'ai analysé d'après une autre version dans *Cinq Cents Contes et Apologues*, t. iii, p. 2, mais ici, c'est la version du *Ta fang pien fo pao ngen king* dont s'est servi l'auteur ; cette version n'a pas encore été traduite dans une langue européenne.

Dans les scènes B. 1–5, on trouve l'histoire de l'ascète et de la biche (cf. *Cinq Cents Contes*, t. i, p. 81–2). Ici aussi la version est celle du *Ta fang pien fo pao ngen king*.

B

Inscriptions on silk paintings Ch. 00167 (Pl. LXI) and Ch. lvii. 004 (Pl. LXVII) representing Avalokiteśvara (see above, pp. 970 sq., 1082).

Ch. 00167 (Pl. LXI).

Au-dessous de la figure principale :

'Adoration au Bodhisattva Kouan-yin.'

A droite :

'Adoration au Bodhisattva qui fait une offrande.'

A gauche :

'Adoration au Bodhisattva Parfum Précieux qui fait une offrande.'

En bas de la planche, les lignes verticales de l'inscription centrale se lisent *de gauche à droite* et signifient :

'Le chef pur et croyant, chef de bataillon d'infanterie, Tchang K'ia-k'iao, a peint avec respect une représentation du Bodhisattva Kouan-chi-yin ; il souhaite que les âmes de son père et de sa mère défunts naissent dans la terre pure (Sukhâvatî) et ne tombent pas dans les trois voies mauvaises, que tous les membres de leur famille, grands et petits, rencontrent perpétuellement le bonheur. Je fais vœu que moi, le donateur, de tout cœur je présenterai des offrandes, que je ne cesserai pas de brûler des parfums, que j'allumerai perpétuellement des lampes. Ceci me servira à me les rappeler dans les autres années.

La quatrième année k'ai-pao, année jin-chin, le sixième jour du neuvième mois, j'ai inscrit cette notice commémorative.'

Le 6e jour du 9e mois de la 4e année k'ai-pao correspond au 27 octobre 971 ; mais si on considère comme exacte l'indication cyclique de l'année jin-chin (qui est la 5e année k'ai-pao), la date est le 15 octobre 972. C'est cette dernière date qui est la plus vraisemblable, car il est plus probable que le donateur se soit trompé sur le comput du nien-hao que sur les caractères cycliques.

A droite, devant le premier des hommes, on lit :

'Le père défunt, le disciple du Buddha pur et dévot, le sage du Mahâyâna, Tchang Yun-tchou.'

A gauche, devant la première des femmes, on lit :

'La tendre mère défunte, dame Li, de tout son cœur fait cette offrande.'

A droite, devant le second des hommes, on lit :

'Le donateur, depuis longtemps (?) chef de bataillon d'infanterie à Touen-houang, Tchang K'ia-k'iao, de tout son cœur fait cette offrande.'

A droite, devant le troisième des hommes, on lit :

'Le donateur, le disciple fidèle et dévot, Tchang Cheng-tchong, fait cette offrande.'

A gauche, devant la seconde des femmes, on lit :

'La nouvelle épouse, dame Song, de tout son cœur fait cette offrande.'

A gauche, devant la troisième femme, on lit :

'La nouvelle épouse, dame Fan (?), de tout son cœur fait cette offrande.'

N.B. Les donateurs sont donc Tchang K'ia-k'iao et Tchang Cheng-tchong qui est vraisemblablement son frère, ou peut-être son fils ; 'la nouvelle épouse,' c'est-à-dire vraisemblablement la femme qui n'est pas défunte, qui est toujours en vie, dame Song, est, sans doute, l'épouse de Tchang K'ia-k'iao ; quant à dame Fan, elle doit être la femme de Tchang Cheng-tchong. Les bénéficiaires sont le père et la mère défunts de Tchang K'ia-k'iao et de celui qui est vraisemblablement son frère, Tchang Cheng-tchong ; c'est par inadvertance que l'auteur de la

peinture a ajouté au-dessous du nom de la mère la formule 'de tout son cœur fait cette offrande'; la mère défunte ne peut être considérée comme une donatrice : elle est, au contraire, la bénéficiaire de l'offrande.

Ch. lvii. 004. (Pl. LXVI)

Image de Kouan-yin. En haut, à gauche, l'inscription :

'Adoration au Bodhisattva Kouan-chi-yin.'

Les deux assistants sont, l'un bon, l'autre méchant ; à gauche on lit :

'Le jeune garçon bon fait l'offrande.'

A droite on lit : 'Le jeune garçon méchant, au moment où il fait l'offrande.'

Les lignes verticales de l'inscription du bas se lisent *de gauche à droite* ; elles signifient :

'Le donateur, disciple pur et dévot du Buddha, Mi Tseu-tö, fonctionnaire chargé de la surveillance des jardins (?) à Touen-houang, en même temps teneur de livres pour les champs (?) et les familles de Ta-hing, a peint avec respect une représentation du Bodhisattva Kouan-chi-yin, la grande miséricordieuse, la grande compatissante, qui délivre de peine. Que le royaume soit paisible et que les hommes soient contents ; que la patrie soit toujours florissante ; que la population soit calme et heureuse ; qu'on ne rencontre pas de calamités ; que les enfants et les petits-enfants soient abondants ; que pendant des myriades et des milliers d'années il y ait richesses, dignités et prospérité. Que par la fumée des parfums et par les lampes pures éternellement on s'acquitte des offrandes.

'En ce temps, le dix-septième jour du septième mois de la huitième année t'ai-ping hing-koua (27 août 983), cette notice commémorative a été écrite.'

A droite et à gauche de cette inscription sont représentés les donateurs et les donatrices.

A droite, devant le premier homme du premier registre, on lit :

'Le donateur, Mi Tseu-tö, éternellement s'acquitte de faire l'offrande de tout son cœur.'

A droite, devant le second homme du premier registre, on lit :

'Le fils, (Mi) Yuan-tch'ang, de tout son cœur fait l'offrande.'

A droite, devant le troisième homme du premier registre, on lit :

'Le fils, Mi ◯-◯, de tout son cœur fait l'offrande.'

A droite, devant le quatrième homme du premier registre, on lit :

'Le fils, (Mi) Po-tchang, de tout son cœur fait l'offrande.'

A droite, devant le premier homme du second registre, on lit :

'Le petit-fils, (Mi) Tch'ou-◯, éternellement s'acquitte de faire l'offrande de tout son cœur.'

A droite, devant le second homme du second registre, on lit :

'Le petit-fils, (Mi) Tch'ou-ting, de tout son cœur fait l'offrande.'

A droite, devant les deux enfants du deuxième registre, on lit :

'Le petit-fils, (Mi) Tch'ou-◯, et le petit-fils, (Mi) Tch'ang-hing, font l'offrande.

A gauche, devant la première femme du premier registre, on lit :

'La nouvelle épouse du donateur, dame Ts'ao, éternellement s'acquitte de faire l'offrande de tout son cœur.

A gauche, devant la seconde femme du premier registre, on lit :

'La fille, Ts'ing-pi, de tout son cœur fait l'offrande ; mariée dans la famille Li.'

A gauche, devant la troisième femme du premier registre, on lit :

'La nouvelle épouse, dame Yin, de tout son cœur fait l'offrande.'

A gauche, devant la quatrième femme du premier registre, on lit :

'La nouvelle épouse, dame Wang, de tout son cœur fait l'offrande.'

A gauche, devant la première femme du second registre, on lit :

'La nouvelle épouse, dame K'ang, de tout son cœur fait l'offrande.'

A gauche, devant la seconde femme du second registre, on lit :

'La nouvelle épouse du petit-fils, dame Tchang, de tout son cœur fait l'offrande.'

A gauche, devant le premier enfant du second registre, on lit :

'Le petit-fils, (Mi) Tch'ou-tseu, de tout son cœur fait l'offrande.'

A gauche, devant le second enfant du second registre, on lit :

'Le petit-fils, (Mi) Tchang-fa, de tout son cœur fait l'offrande.'

N.B. Les donateurs sont donc Mi Tseu-tö, ses trois fils et ses six petits-fils; les noms de quatre des petits-fils commencent tous par le caractère *Tch'ou*; les quatre petits-fils doivent donc être frères; les noms personnels de deux autres petits-fils, qui sont sans doute frères, commencent par le caractère *Tch'ang*. Quant aux femmes, on voit représentées la femme du donateur, Mi Tseu-tö, sa fille qui est mariée à un homme d'une autre famille, puis ses trois brus qui doivent être les femmes de ses trois fils, et enfin la femme d'un de ses petits-fils qui seul est en âge d'être marié.

C

Inscriptions on paper sketch, Ch. 00207 (Pl. XCVI; see above, p. 976).

Un cheval et un chameau conduits par deux serviteurs.

En tournant l'image sens dessus dessous, on lit une mention répétée plusieurs fois d'une manière plus ou moins complète; elle se lit comme suit:

'Sous les grands Song, la quatrième année k'in-to, année ping-yin, le dix-neuvième jour du cinquième mois (10 juin 966), Ts'ao Yuan-tchong, ayant les titres de gouverneur militaire (tsie tou chi) du district militaire de Kouei-yi nommé par décret impérial, spécialement promu (t'o tsin) contrôleur (kien-kiao), investi du titre de grand roi, et celle qui a reçu par décret impérial le titre d'épouse (princesse) du royaume de Liang.'

N.B. Le cheval est vraisemblablement la monture du roi; le chameau celle de la princesse; cette esquisse paraît avoir été un fragment d'une composition plus étendue dans laquelle le roi lui-même et la princesse devaient être représentés.

Sous la tête du chameau et, en sens inverse, sur la patte de derrière du chameau, on lit:

'K'ou-k'ou (onomatopée) on brûle constamment les parfums précieux; les vapeurs parfumées remplissent les avenues célestes.'

La première de ces notices s'accorde parfaitement avec la notice du Song chi (Chap. 490, p. 96) sur Cha-tcheou; nous la traduisons intégralement ci-dessous:

'Cha-tcheou était autrefois, sous les Han, l'ancien territoire de Touen-houang. Sous les T'ang, à la fin de la période t'ien-pao (742-755), il tomba en la possession des Jong de l'ouest. La cinquième année ta-tchong (852), Tchang Yi-tch'ao[1] fit sa soumission avec tout son arrondissement;[2] par un édit impérial Cha-tcheou fut érigé en district militaire de Kouei-yi, et Tchang Yi-tch'ao en fut nommé gouverneur militaire (tsie-tou-chi) avec autorité sur les arrondissements de Ho, Cha, Kan, Sou, Yi et Si, surveillant-inspecteur (kouan-tch'a chi), délégué aux campements et aux champs (ying-t'ien chi), délégué aux décisions judiciaires (tch'ou-tchi chi).'[3]

Quand (Tchang) Yi-tch'ao vint rendre hommage à la cour, il remit à son neveu (Tchang) Wei-chen l'autorité sur l'arrondissement (de Cha).

A l'époque des Liang, dont le nom de famille était Tchou (907-922), la postérité de la famille Tchang s'interrompit; les gens de l'arrondissement présentèrent pour chef le gouverneur (tchang chi) Ts'ao Yi-kin; à la mort de Ts'ao Yi-kin, son fils (Ts'ao) Yuan-tchong[4] lui succéda. La deuxième année hien-to (955) de la dynastie

[1] Il existe, à Touen-houang, une inscription chinoise de l'année 894 composée par un membre de la famille impériale des T'ang, qui était le gendre de Tchang Yi-tch'ao; elle nous donne des renseignements sur ce dernier personnage. Cf. Chavannes, *Dix Inscriptions chinoises de l'Asie centrale*, pp. 77 sqq.

[2] La soumission aux Tibétains avait duré 120 ans. Cf. *op. cit.*, p. 79, n. 5.

[3] Dans l'inscription de 894 (*op. cit.*, p. 80) la titulature de Tchang Yi-tch'ao est la suivante: gouverneur militaire (tsie-tou-chi) des onze arrondissements de la région du Ho-si et du Long-yeou, kouan-nei-chi, surveillant-inspecteur (kouan-tch'a chi), délégué aux décisions judiciaires (tch'ou-tchi chi), ya-fan-lo chi, délégué aux campements et aux champs (ying-t'ien chi), -tou-chi.

[4] Il semble qu'entre Ts'ao Yi-kin et Ts'ao Yuan-tchong l'historien omet un règne intermédiaire, celui de Ts'ao Yuan-chen qui, d'après le premier caractère de son nom personnel, doit avoir été le frère aîné de Ts'ao Yuan-tchong; dans le récit que nous a laissé d'une ambassade à Khotan, de 938-942, un adjoint à cette mission nommé Kao Kiu, c'est en 939 que l'ambassade doit arriver à Koua-tcheou et à Cha-tcheou. (Cf. Rémusat, *Histoire de la ville de Khotan*, p. 76, et Richthofen, *China*, i. p. 536 n.) Kao Kiu dit ceci: 'Dans ces deux arrondissements il y a beaucoup de Chinois; quand ils apprirent qu'un envoyé des Tsin était arrivé, leur préfet Ts'ao Yuan-chen et sa suite vinrent à sa rencontre et lui demandèrent des nouvelles du Fils du Ciel.' Ainsi en 939, le personnage qui gouvernait à Koua-tcheou et à Cha-tcheou était Ts'ao Yuan-chen, fils de Ts'ao Yi-kin; dès 955 il avait eu pour successeur son frère cadet Ts'ao Yuan-tchong qui exerça l'autorité jusqu'à sa mort survenue en 980.

Tcheou, il vint rendre hommage à la cour; on lui conféra les titres de gouverneur militaire (tsie-tou-chi) de son district,[5] de contrôleur (kien-kiao), de commandant (t'ai-wei), d'assimilé aux tchong-chou men-hia, de p'ing-tchang-chi; on fondit un sceau pour lui en faire présent. La troisième année kien-long (962), on augmenta ses titres en le nommant en même temps tchong-chou-ling et son fils (Ts'ao) Yen-king devint délégué protecteur de l'arrondissement de Koua.

La cinquième année hing-kouo (980) (Ts'ao) Yuan-tchong mourut.

Son fils (Ts'ao) Yen-lou envoya des gens apporter tribut. On conféra à titre posthume à (Ts'ao) Yuan-tchong le titre de roi régional de Touen-houang; on donna à (Ts'ao) Yen-lou le titre de gouverneur militaire de son district; son frère cadet (Ts'ao) Yen-cheng devint préfet de Koua-tcheou et (un autre de ses frères cadets, Ts'ao) Yen-jouei, fut nommé surveillant général dans le ya-men (de Cha-tcheou).

La quatrième année hsin-p'ing (1001), (Ts'ao) Yen-lou et (Ts'ao) Yen-jouei furent mis à mort par leur neveu (Ts'ao) Tsong-cheou. (Ts'ao) Tsong-cheou exerça provisoirement les fonctions de président (lieou lieou) et il prit son frère cadet (Ts'ao) Tsong-yun pour administrateur provisoire à Koua-tcheou; il adressa une requête à l'empereur pour demander un insigne d'autorité avec drapeau;[6] alors on conféra à (Ts'ao) Tsong-cheou le titre de gouverneur militaire (tsie-tou-chi) et à (Ts'ao) Tsong-yun les titres de contrôleur (kien-kiao), chang-chou tso p'ou-ye, administrateur de Koua-tcheou; (Ts'ao) Tsin-chouen, fils de (Ts'ao) Tsong-cheou, fut nommé chef d'état-major dans l'intérieur du ya(-men).

A la fin de la période ta-tchong siang-fou (1008–1016), (Ts'ao) Tsong-cheou mourut. On donna à (Ts'ao) Tsin-chouen le titre de gouverneur militaire de son district, et son frère cadet (Ts'ao) Yen-houei reçut les titres de contrôleur (kien-kiao), président du ministère de la justice, administrateur de Koua-tcheou. (Ts'ao) Tsin-chouen adressa une requête au trône pour demander un exemplaire du Tripiṭaka écrit en lettres dorées, ainsi que du thé, des médicaments et des feuilles d'or; un décret impérial lui fit don de cela. Puis, au début de la période t'ien-cheng (1023–1024) il envoya une ambassade à la cour pour exprimer ses remercîments et pour apporter en tribut de l'encens, du sel d'ammoniaque et des blocs de jade.

Depuis la période king-yeou (1034–1037) jusqu'à la période houang-yeou (1049–1053) ce pays apporta en tout sept fois des produits locaux en tribut.

[5] C'est-à-dire tsie-tou-chi du district militaire de Kouei-yi. Dans la note inscrite sur le dessin découvert par Sir A. Stein, en 966, Ts'ao Yuan-tchong porte effectivement les titres de tsie-tou-chi du district militaire de Kouei-yi, et de contrôleur (kien-kiao); il a aussi celui de spécialement promu (t'o tsin) et il est investi du titre de grand roi.

[6] Ces insignes sont déjà mentionnés par le *Tcheou li* (trad. Biot, t. i, p. 335): 'Sur les routes et chemins on emploie les tablettes au drapeau.'

APPENDIX B

INVENTORY LIST OF COINS FOUND OR OBTAINED

PREPARED FROM NOTES BY

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I. COINS OBTAINED AT YARKAND.

(See above, p. 84.)

a. **Coins presented by Pên Ta-jên, Amban of Yārkand, from a local find.** (See above, i. p. 84.)

1 Chinese coin, T'ang period, with legend *K'ai-yüan.*

1 Chinese coin of Shun-hua period (990–995 A. D.); see Pl. CXLI, No. 5.

1 Chinese coin of Pao-yüan period (1038–40 A. D.).

2 Chinese coins of Hsi-ning period (1068–78 A. D.); see Pl. CXLI, No. 12.

2 Chinese coins of Yüan-fêng period (1078–86 A. D.).

1 Chinese coin of Yüan-yu period (1086–94 A. D.).

1 Chinese coin of Ch'ung-ning period (1102–7 A. D.); see Pl. CXLI, No. 18.

1 Chinese coin of Ta-kuan period (1107–11 A. D.); see Pl. CXLI, No. 16.

b. 1 Sino-Kharoṣṭhī coin, purchased at Yārkand; see Pl. CXL, No. 5.

II. COINS PURCHASED AT KARGHALIK.

(See *Desert Cathay*, i. p. 141.)

2 coins Æ. of Mithradates II. of Parthia; see Pl. CXL, No. 11.

1 coin Æ. of Hermaeus of India; see Pl. CXL, No. 8.

1 coin Æ. of Constantine II. (337–340 A. D.); see Pl. CXL, No. 12.

1 coin Æ. of Constans (337–350 A. D.); see Pl. CXL, No. 13.

III. COINS COLLECTED FROM TOGUJAI, MOJI.

31 Muhammadan copper coins of types referred to *Ancient Khotan*, i. p. 575; see Pl. CXLI, No. 30.

IV. COINS COLLECTED WITHIN KHOTAN OASIS.

(See above, pp. 101 sq.)

A. COINS OBTAINED AT YŌTKAN SITE.

a. **Copper coins purchased, August 11, 1906, batch Yo. 3. a, b.**

8 Sino-Kharoṣṭhī coins.

14 Chinese coins, with legend *Wu-chu.*

26 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

15 frs. of Chinese coins of which all legible pieces are of Ch'ien-yüan period (758–760 A. D.).

8 Chinese coins of Ta-li period (766–780 A. D.).

b. **Copper coins purchased September 12, 1906, batch Yo. 012. e.**

3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

3 Chinese coins of Ta-li period (766–780 A. D.).

c. **Copper coins presented by Khudā-berdi, Yüz-bāshi of Yōtkan, batch Yo. 0095.**

4 coins of Ch'ien-yüan period (758–760 A. D.).

d. **Copper coins bought July 29, 1908, batch Yo. 00124.**

1 coin of Kaniṣka (Rev. Mithra); see Pl. CXL, No. 10.

7 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

2 Muhammadan coins of Yārkand, modern.

e. **Specimens from a hoard of copper coins found at Yōtkan, batch Yo. 00136.**

48 Chinese coins, with legend *Wu-chu*, much worn and clipped.

B. COINS PURCHASED AT KHOTAN, MOST OF THEM PROBABLY BROUGHT FROM YŌTKAN.

a. Copper coins, batches Yo. 03, 04.

4 Chinese coins, much worn, probably with legend *Wu-chu.*

3 uncertain local pieces. The specimen, Pl. CXL, No. 38, much clipped, is of lead, and in shape and type recalls the coin shown in *Ancient Khotan*, ii, Pl. LXXXIX, No. 5, regarding which see *ibid.* i. p. 205. Cf. also Hoernle, *Report on C.-A. Ant.*, i. p. 18, Pl. II, fig. 3.

7 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.).

b. Copper coins, batch Yo. 06. g.

6 Sino-Kharoṣṭhī coins.

1 Chinese T'ang coin, with legend *K'ai-yüan.*

3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

c. Copper coins, batch Yo. 010.

5 Sino-Kharoṣṭhī coins.

22 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 31.

11 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.).

12 small Muhammadan coins, local issues.

d. Copper coins, batch Yo. 0080.

14 Sino-Kharoṣṭhī coins; see Pl. CXL, No. 4, 7.

1 Chinese T'ang coin, with legend *K'ai-yüan*; see Pl. CXL, No. 39.

1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

3 Chinese coins of Ta-li period (766–780 A. D.).

1 Chinese coin of Chih-tao period (995–998 A. D.).

1 Chinese coin of Yüan-fêng period (1078–86 A. D.).

2 Muhammadan coins, mediaeval.

e. Copper coins, batches Yo. 0085, 0086.

1 Sino-Kharoṣṭhī coin, much corroded.

5 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese T'ang coin, with legend *K'ai-yüan.*

1 Chinese ten-cash token of Kulja (1851–62 A. D.).

f. Copper coins, batches Yo. 00102, 00103.

3 Chinese coins, clipped, with legend *Wu-chu.*

2 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

2 Muhammadan coins, of Muḥammad Arslān.

g. Copper coins, batch Yo. 00106.

1 Sino-Kharoṣṭhī coin fr.

3 Chinese coins, with legend *Wu-chu.*

21 Chinese coins, incl. frs. of Ch'ien-yüan period (758–760 A. D.).

3 Chinese coins of Ta-li period (766–780 A. D.).

1 Chinese coin of T'ien-hsi period (1017–22 A. D.).

h. Copper coins, batches Yo. 00108, 00123, 00128.

3 Sino-Kharoṣṭhī coins; see Pl. CXL, No. 6.

1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.).

i. Copper coins, batch Yo. 00131.

1 Sino-Kharoṣṭhī coin.

1 Kuṣana coin of Kaniṣka, Rev. Nanaia; see Pl. CXL, No. 9.

11 Chinese coins, with legend *Wu-chu.*

1 Chinese coin, with legend *Wu-chu*, late type; see Pl. CXL, No. 37.

1 Chinese T'ang coin, with legend *K'ai-yüan.*

19 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.); see Pl. CXL, No. 47.

5 Muhammadan mediaeval coins, illegible.

2 ten-cash tokens of Kulja (1851–62 A. D.); see Pl. CXLI, No. 25.

j. Copper coins, batches Yo. 00132, 00137, 00155.

6 Sino-Kharoṣṭhī coins.

2 Chinese coins, with legend *Wu-chu.*

7 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

6 Chinese coins of Ta-li period (766–780 A. D.).

C. COINS OF MISCELLANEOUS ORIGIN PURCHASED AT KHOTAN.

a. Copper coins, batch Khotan. 01. y.

1 Chinese T'ang coin, with legend *K'ai-yüan.*

9 Chinese coins of Ch'ien-yüan period (758–760 A. D.); see Pl. CXL, No. 45.

1 Chinese coin of Ta-li period (766–780 A. D.); see Pl. CXL, No. 46.

1 Chinese coin of Chih-tao period (991–998 A. D.).

1 Chinese coin of Chih-p'ing period (1064–68 A. D.).

1 Chinese coin of Shêng-sung period (1101–2 A. D.).

b. Copper coins, batch Khotan. 04. a.

3 Chinese coins of Ch'ien-yüan period (758–760 A. D.); see Pl. CXL, No. 42.

1 Chinese coin of Hsien-p'ing period (998–1004 A. D.).

1 Chinese coin of Ching-tê period (1004–8 A. D.).

1 Chinese coin of Chih-p'ing period (1064–68 A. D.); see Pl. CXLI, No. 10.

4 Chinese coins of Hsi-ning period (1068–78 A. D.).

6 Chinese coins of Yüan-fêng period (1078–86 A. D.).

1 Chinese coin of Yüan-yu period (1086–94 A. D.).

1 Chinese coin of Yüan-fu period (1098–1101 A. D.).

1 Chinese coin of Shêng-sung period (1101–2 A. D.).

1 Chinese coin of Chêng-ho period (1111–18 A. D.).

1 Chinese coin of Shao-hsing period (1131–63 A. D.); see Pl. CXLI, No. 21.

1 Chinese coin of Shao-hsi period (1190–95 A. D.).

c. Copper coins, batches Khotan. 001, 002.

2 Sino-Kharoṣṭhī coins.

1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

1 Muhammadan coin of Muḥammad Arslān.

2 coins of Yārkand, modern; see Pl. CXLI, No. 33.

d. Copper coins, batches Khotan. 0026, 0029–0031.

8 Sino-Kharoṣṭhī coins; see Pl. CXL, No. 2.

11 Chinese coins, with legend *Wu-chu*; see Pl. CXL No. 21.

2 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.).

4 Muhammadan coins of 'Sulaimān Khāqān' (?); see Pl. CXLI, No. 29.

e. Silver and copper coins, batches Khotan. 0074, 0084.

1 Æ. Muhammadan coin, circ. 14th cent., almost illegible.

1 Æ. Muhammadan coin, 14–15th cent., illegible.

f. Copper coins, batch Khotan. 0098.

1 Chinese coin of Yüan-fêng period (1078–86 A. D.).

1 Chinese coin of Ch'ien-yen period (1127–31 A. D.); see Pl. CXLI, No. 20.

g. Gold Dīnār, Badruddin. 003, much clipped, probably of 'Alā-ud-dīn Khwārizm-shāh, 1199–1220 A.D.; see Pl. CXLI, No. 31.

h. Copper coins from find at Halāl-bāgh.

36 Chinese coins, with legend *Wu-chu.*

i. Copper coins, batch Ku. a–i, from hoard found at Kum-bāgh, Tosalla canton.

10 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

k. Copper coins, batch Khotan. 0097, said to have been found south of Tar-bogaz, Zawa canton.

36 Muhammadan coins, of types illustrated in Hoernle, *Report on C.-A. Ant.*, Pl. I, figs. 30–35; see Pl. CXLI, No. 28.

D. COPPER COINS BROUGHT TO KHOTAN FROM 'TATI' SITES E. OF YURUNG-KASH.

(See above, p. 102.)

a. Coins collected by 'treasure-seekers' of Tam-öghil, batches Khotan. 01. z, 02, 06. l, m, 0027, 0028, 0032–35, 0045.

9 Sino-Kharoṣṭhī coins; see Pl. CXL, Nos. 1, 3.

1 Chinese coin, with legend *Huo-ch'üan*; see Pl. CXL, No. 14.

34 Chinese coins, with legend *Wu-chu*, many clipped and of late issues.

1 Chinese T'ang coin, with legend *K'ai-yüan.*

16 Chinese coins of Ch'ien-yüan period (758–760 A.D.); see Pl. CXL, No. 43.

2 Chinese coins of Ta-li period (766–780 A. D.).

1 Chinese coin of T'ai-p'ing period (976–984 A. D.).

1 Chinese coin of Hsien-p'ing period (998–1004 A. D.).

1 Chinese coin of Hsiang-fu period (1008–17 A. D.).

1 Chinese coin of T'ien-shêng period (1023–32 A. D.).

1 Chinese coin of Ching-yu period (1034–38 A. D.).

1 Chinese coin of Pao-yüan period (1038–40 A. D.).

2 Chinese coins of Hsi-ning period (1068–78 A. D.).

1 Chinese coin of Yüan-fêng period (1078–86 A. D.).

1 Chinese coin of Yüan-yu period (1086–94 A. D.).

2 Chinese coins of Yüan-fu period (1098–1101 A. D.).

1 Chinese coin of Hsüan-ho period (1119–26 A. D.).

3 Chinese coins of Ch'êng-ho, Ch'ung-ho or Hsüan-ho periods (1111–26 A. D.; only *-ho* legible).

1 Chinese coin of Shao-hsing period (1131–63 A. D.).

1 Chinese coin of Sung dynasty, date doubtful.

3 Muhammadan coins of Muḥammad Arslān; also 15 illegible coins, probably of same.

3 Muhammadan coins of 'Sulaimān Khāqān' (?); see Pl. CXLI, No. 27.

1 Muhammadan coin of Sāmānide dynasty (circ. 10th cent.).

2 Muhammadan coins, illegible (14th cent.).

b. Coins said to have been found N. of Jiya and Suya.

5 Chinese coins, with legend *Wu-chu.*

2 Chinese coins of Sung (5th century, uncertain).

5 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

1 Chinese coin of Ta-li period (766–780 A. D.).

2 Chinese coins of Hsi-ning period (1068–78 A. D.).

1 Chinese coin of Ch'ung-ning period (1102–7 A. D.).

c. Coin from site S. of Sampula.

1 Chinese coin, with legend *Wu-chu*, of late date.

d. Coins said to have been found at, or near, Kine-tokmak.

4 Sino-Kharoṣṭhī coins.

1 Chinese coin, with legend *Wu-chu.*

3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

2 Chinese coins of Ch'ung-ning period (?1102–7 A. D.).

5 Muhammadan coins, mediaeval, illegible.

e. Coins said to have come from 'Tatis' of Ak-terek.

15 Chinese coins, with legend *Wu-chu.*

25 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

4 Chinese coins of Ta-li period (766–780 A. D.).

7 Muhammadan coins, much worn and illegible.

V. COPPER COINS FOUND AT DESERT SITES N. OF JIYA.[1]

(See above, pp. 129, 131.)

a. Coins found at Kök-kum-ārish.

3 Chinese coins, uninscribed, probably of 5th cent.

b. Coins found at Kine-tokmak.

2 Chinese coins, uninscribed, probably of 5th cent.

[1] In the record of coins found or excavated at sites, fragments of coins, when belonging to distinct specimens, have been counted as coins.

VI. COPPER COINS FOUND AT AK-TEREK SITE.

(See above, p. 140.)

a. Coin picked up between Ak-terek and Siyelik.
1 Chinese coin of Pao-yüan period (1038–40 A. D.).

b. Coins collected from 'Tatis' of Ak-terek.
13 Chinese coins, uninscribed or illegible, prob. of 5th cent.
1 Chinese T'ang coin, with legend *K'ai-yüan.*
1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).
1 Chinese coin of Hsiang-fu period (1008–17 A. D.); see Pl. CXLI, No. 7.
1 Chinese coin of Yüan-fu period (1098–1101 A. D.).
12 frs. of Chinese Sung and Muhammadan coins (13–14th cent.).

VII. COPPER COINS FOUND AT KHĀDALIK AND NEIGHBOURING SITES.

(See above, p. 159.)

a. Two strings of 'cash' pieces found in N.W. corner of cella Kha. ii.
First string (including 13 pieces found detached):
2 Chinese coins, with legend *Wu-chu.*
1 Chinese T'ang coin, with legend *K'ai-yüan.*
25 Chinese coins of Ch'ien-yüan period (758–760 A. D.); see Pl. CXL, No. 44.
5 Chinese coins of Ta-li period (766–780 A. D.); see Pl. CXLI, No. 2.
Second string:
2 Chinese coins, with legend *Wu-chu.*
2 Chinese T'ang coins, with legend *K'ai-yüan.*
42 Chinese coins of Ch'ien-yüan period (758–760 A. D.).
8 Chinese coins of Ta-li period (766–780 A. D.); see Pl. CXLI, No. 1.

b. Coins found outside W. wall of cella Kha. ii.
1 Chinese coin, illegible, probably *Wu-chu* piece.
9 Chinese coins of Ch'ien-yüan period (758–760 A. D.).
3 Chinese coins of Ta-li period (766–780 A. D.).

c. Coin found in shrine Kha. vi.
1 Chinese T'ang coin, with legend *K'ai-yüan.*

d. Coins found at Kighillik, E. of Khādalik.
1 Chinese coin, uninscribed.
1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

e. Coins received from Mullah Khwāja as found near Khādalik.
1 Chinese coin, with legend *Wu-chu.*
1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).
1 Chinese coin of Chien-chung period (780–784 A. D.); see Pl. CXLI, No. 3.

f. Coin found at Balawaste.
1 Chinese coin, illegible, but probably with legend *Wu-chu.*

g. Coin found at Mazār-toghrak.
1 Chinese coin, probably late *Pan-liang* 'cash' (latter half of 2nd cent. B. C.).

VIII. COPPER COINS FOUND AT NIYA SITE.

(See above, p. 242.)

a. Coins found near ruin N. XII.
1 Chinese coin, with legend *Huo-ch'üan*; see Pl. CXL, No. 15.
1 Chinese coin, with legend *Wu-chu*, of type ascribed to Kuang Wu-ti (25–58 A. D.).

b. 1 Chinese coin, with legend *Huo-ch'üan*, found near ruin N. XIV.

c. Coins found near ruin N. XXIV.
2 Chinese coins, with legend *Wu-chu*, of type ascribed to Kuang Wu-ti (25–58 A. D.).
1 Chinese coin, with legend *Wu-chu*, clipped, of type ascribed to Hsien-ti (190–220 A. D.).

d. 3 Chinese coins, with legend *Wu-chu*, of early type, found in N. portion of site.

e. 2 Chinese coins, apparently clipped *Wu-chu* pieces, found near S.E. ruins of site.

IX. COPPER COINS FOUND AT ENDERE SITE.

(See above, p. 282.)

a. Coins found near Stūpa.
4 Chinese coins, with legend *Wu-chu.*
1 Chinese coin, uninscribed.

b Coins found between Stūpa and T'ang fort.
2 Chinese coins, with legend *Wu-chu.*
1 Chinese coin, 'goose-eye', uninscribed.

c. 1 Chinese coin found W. of ruin E. VII, clipped, with legend *Wu-chu.*

d. Miscell. frs. of Chinese coins, with legend *Wu-chu*, found near T'ang fort.

X. COPPER COINS COLLECTED AT VĀSH-SHAHRI SITE.

(See above, p. 307.)

3 Chinese T'ang coins, with legend *K'ai-yüan*.
1 Chinese coin of T'ien-shêng period (1023–32 A. D.).
1 Chinese coin of Yüan-fêng period (1078–86 A. D.); see Pl. CXLI, No. 13.
1 Chinese coin of Yüan-yu period (1086–94 A. D.); see Pl. CXLI, No. 14.
1 Chinese coin of Shêng-sung period (1101–2 A. D.); see Pl. CXLI, No. 15.
1 Chinese coin of T'ang type, illegible.

XI. COPPER COINS FOUND AT LOU-LAN SITES.

A. COINS FROM LOU-LAN STATION, L. A.

(See above, pp. 361 sq., 375, 385.)

a. 1 Chinese coin, fr., clipped, with legend *Wu-chu*, found 9 miles N. of Camp 122.
b. Coins picked up W. of L. A. site, December 17, 1906.
1 Chinese coin, with legend *Huo-ch'üan*; see Pl. CXL, No. 17.
2 Chinese coins, uninscribed, small.
c. Coins collected from wind-eroded ground near ruined station L. A.
1 Chinese coin, with legend *Hsiao ch'üan chih i*, of Wang Mang (issued 7 A. D.).
3 Chinese coins, with legend *Huo-ch'üan*; see Pl. CXL, No. 18.
48 Chinese coins, with legend *Wu-chu*.
25 Chinese coins, clipped, with legend *Wu-chu*; see Pl. CXL, No. 29.
35 Chinese coins, small, uninscribed ('goose-eye' pieces); see Pl. CXL, Nos. 32–34.
d. Coins found at ruin L. A. I.
7 Chinese coins, with legend *Wu-chu*.
e. Coins found within, or close to, ruin L. A. II.
7 Chinese coins, clipped, with legend *Wu-chu*; see Pl. CXL, No. 26.
f. 1 Chinese coin, with legend *Wu-chu*, found in ruin L. A. III. ii.
g. Coins found within, or close to, ruins L. A. IV–VI.
1 Chinese coin, with legend *Huo-ch'üan*; see Pl. CXL, No. 19.
9 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 27.
19 Chinese coins, much clipped or small, of *Wu-chu* type.
h. Coins excavated from refuse-heap L. A. VI. ii.
1 Chinese coin, with legend *Wu-chu*.
2 Chinese coins, *Wu-chu* type, much clipped.
i. Coins found at ruin L. A. VII.
1 Chinese coin, with legend *Huo-ch'üan*; see Pl. CXL, No. 20.
3 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 28.
16 Chinese coins, of clipped *Wu-chu* or 'goose-eye' type.
j. Coins found near ruins L. A. VIII–IX.
7 Chinese coins, with legend *Wu-chu*.
10 Chinese coins, of clipped *Wu-chu* type.

B. COINS FROM RUINED SITE L. B.

(See above, pp. 395, 451.)

a. Coins found in vicinity of L. B.
2 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 22.
1 Chinese coin of clipped *Wu-chu* type; see Pl. CXL, No. 30.
b. Coins found at, or near, ruins L. B. I–III.
1 Chinese coin, with legend *Huo-ch'üan*.
1 Chinese coin, with legend *Wu-chu*.
4 Chinese coins of clipped *Wu-chu* type, or uninscribed.
c. Coins found at ruins L. B. IV–V.
4 Chinese coins, with legend *Wu-chu*.
1 Chinese coin of clipped *Wu-chu* type.
d. 1 Chinese coin, with legend *Wu-chu*, found 1 mile W.S.W. of Camp 126.

XII. COPPER COINS FOUND AT MERDEK-TIM SITE.

(See above, p. 453.)

Coins found on rampart of ancient fort.
2 Chinese coins, with legend *Huo-ch'üan*.
4 Chinese coins of clipped *Wu-chu* type.

XIII. COPPER COINS FOUND AT MĪRĀN SITE.

(See above, p. 474.)

a. 1 Chinese coin, with legend *Wu-chu*, found to N. of ruined shrine M. III.

b. 7 Chinese T'ang coins, with legend *K'ai-yüan*, found on eroded ground N. of ruined fort; see Pl. CXL, No. 40.

c. Coins found on surface within ruined fort, M. I.

1 Chinese coin of Ch'êng-ho period (1111–18 A.D.); see Pl. CXLI, No. 19.

1 Chinese ten-'cash' piece of Turkestān, of Kuang-hsü (1875–1908).

XIV. COPPER COINS FOUND OR COLLECTED AT NAN-HU.

(See above, pp. 616 sq., 627.)

a. Coins excavated within ruined town.

1 Chinese coin, with legend *Wu-chu*.

1 Chinese coin of clipped *Wu-chu* type, illegible.

2 Chinese coin frs., of T'ang period (?).

b. Coins found on eroded site E. and N.E. of ruined town.

1 Chinese coin, with legend *Pan-liang*.

3 Chinese coins, with legend *Huo-ch'üan*; see Pl. CXL, No. 16.

3 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 25.

4 Chinese coins of *Wu-chu* type, clipped or uncertain.

9 Chinese T'ang coins, with legend *K'ai-yüan*.

1 Chinese coin of Huang-sung period (1038–40 A.D.); see Pl. CXLI, No. 9.

c. Coins collected at Nan-hu from vicinity of ruined town.

8 Chinese coins, with legend *Wu-chu*.

3 Chinese coins of clipped *Wu-chu* type.

1 Chinese coin of Chih-tao period (995–998 A.D.).

1 Chinese coin of Ch'ien-lung period (1736–96 A.D.); see Pl. CXLI, No. 23.

d. Coins found at abandoned settlement of Kuan-tsou.

1 Chinese coin of Hsien-p'ing period (998–1004 A.D.); see Pl. CXLI, No. 6.

1 Chinese coin of K'ang-hsi period (1662–1723 A.D.).

4 Chinese coins of Ch'ien-lung period (1736–96 A.D.).

XV. COPPER COINS FOUND ALONG ANCIENT LIMES OF TUN-HUANG.

(See above, pp. 575, 592, 635, 687, etc.)

a. 1 Chinese coin, much clipped, of *Wu-chu* type, found at watch-tower T. IV. c.

b. 1 Chinese coin, with legend *Wu-chu*, found near watch-station T. VI. b.

c. 1 Chinese coin, with legend *Wu-chu*, found on top of watch-tower T. VI. c.; see Pl. CXL, No. 23.

d. 1 Chinese coin, uninscribed, found at ruin T. XI. iii.

e. 2 Chinese coins, with legend *Wu-chu*, found in refuse on slopes of T. XIV.

f. Coins found in bowl below floor of ruined shrine T. XIV. v.

2 Chinese coins, with legend *Wu-chu*.

78 Chinese coins of T'ang period, with legend *K'ai-yüan*; see Pl. CXL, No. 41.

g. 1 Chinese coin, with legend *Wu-chu*, found at ruined magazine T. XVIII. iii.

h. 1 Chinese coin, with legend *Wu-chu*, of early type, found on slope below watch-tower T. XX.

i. 2 Chinese coins of clipped *Wu-chu* type, found W. of watch-tower T. XXVI.

j. 1 Chinese coin, with legend *Wu-chu*, found between watch-towers T. XXVII–XXVIII; see Pl. CXL, No. 24.

k. 2 Chinese coins, with legend *Wu-chu*, found in refuse-heap of watch-tower T. XXVIII.

l. Coins found on eroded ground near watch-tower T. XXVIII.

2 Chinese coin frs., probably of *Wu-chu* type.

1 Chinese coin of Ch'ien-lung period (1736–96 A.D.).

m. 1 Chinese coin, with legend *Wu-chu*, found near watch-tower T. XXXIV.

n. 1 Chinese coin of Ch'ien-lung period (1736–96 A.D.), found at graziers' hut near Camp 171.

XVI. COPPER COINS FOUND AT SO-YANG-CH'ÊNG SITE.

(See above, p. 1106.)

6 Chinese coins, with legend *Wu-chu*; see Pl. CXL, No. 36.

4 Chinese coins, of late *Wu-chu* type.

25 Chinese coins of T'ang period, with legend *K'ai-yüan*.

1 Chinese coin of Ch'ien-yüan period (758–760 A.D.).

1 Chinese coin of T'ai-p'ing period (976–984 A.D.); see Pl. CXLI, No. 4.

1 Chinese coin of Chêng-lung period (1156–61 A.D.); see Pl. CXLI, No. 22.

XVII. COPPER COIN FOUND AT HEI-SHUI-KUO SITE, W. OF KAN-CHOU.

(See above, p. 1133.)

1 Chinese coin of T'ang period, with legend *K'ai-yüan.*

XVIII. COPPER COIN FOUND E. OF CHONG-HASSĀR, TURFĀN.

1 Chinese coin of T'ang period, with legend *K'ai-yüan.*

XIX. COPPER COINS FOUND AT YĀR-KHOTO, TURFAN.

(See above, p. 1168.)

a. Coins found in ruined dwelling Y.K. i.
1 Chinese coin, with legend *Wu-chu.*
97 Chinese coins of T'ang period, with legend *K'ai-yüan.*
2 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

b. Coins found in ruined shrine Y.K. iii.
1 Chinese coin of T'ang period, with legend *K'ai-yüan.*
1 Chinese coin of Ch'ien-chung period (780–784 A. D.).

c. 1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

XX. COPPER COIN FOUND ON RAMPART OF RUINED FORT NEAR USHAK-TAL, KARA-SHAHR.

(See above, p. 1181.)

1 Chinese coin of Ch'ien-yüan period (758–760 A.D.).

XXI. COPPER COIN FOUND AT BAGHDAD-SHAHRI SITE, KARA-SHAHR.

(See above, p. 1182.)

1 Chinese coin of Ch'ien-chung period (780–784 A. D.)

XXII. COPPER COINS EXCAVATED AT 'MING-OI' SITE, N. OF SHŌR-CHUK.

(See above, pp. 1187, 1189, 1191, 1194.)

a. Coins found before image base in shrine Mi. i.
2 Chinese coins of T'ang period, with legend *K'ai-yüan.*
2 Chinese coins of Ta-li period (766–780 A. D.).

b. Coins found in antechapel Mi. x.
4 Chinese coins, with legend *Wu-chu,* much worn.
2 Chinese coins of T'ang period, with legend *K'ai-yüan.*
1 Chinese coin of Ta-li period (766–780 A. D.).
7 Chinese coins of Ch'ien-chung period (780–784 A. D.).

c. Coins found in temple cella Mi. xi.
1 Chinese coin of T'ang period, with legend *K'ai-yüan.*
2 Chinese coins of Ch'ien-chung period (780–784 A. D.).

d. Coins found at image bases in temple passage Mi. xii.
1 Chinese coin with legend *Huo-chüan.*
1 Chinese coin of T'ang period, with legend *K'ai-yüan.*
3 Chinese coins of Ta-li period (766–780 A. D.).
2 Chinese coins of Ch'ien-chung period (780–784 A. D.).

e. Coins found in shrine Mi. xiv.
1 Chinese coin of T'ang period, with legend *K'ai-yüan.*
1 Chinese coin of Ch'ien-chung period (780–784 A. D.).

f. 1 Chinese coin of Ch'ien-chung period (780–784 A. D.), found before entrance to shrine Mi. xvii.

g. Coins found among S.E. group of ruins.
1 Chinese coin of T'ang period, with legend *K'ai-yüan.*
1 Chinese coin of Ch'ien-chung period (780–784 A. D.).

XXIII. COPPER COINS FOUND NEAR RUIN KA. I, KARA-DONG.

(See above, p. 1242.)

2 Chinese coins, with legend *Wu-chu.*

XXIV. COPPER COINS FOUND AT FARHĀD-BĒG-YAILAKI SITE.

(See above, p. 1254 sq.)

a. 4 Chinese coins with legend *Wu-chu,* found near ruin F. I.

b. 3 Chinese coins of 'goose-eye' type, found near ruin F. II.

c. 1 Chinese coin, with legend *Wu-chu,* found in cella F. III. i.

d. 1 Chinese coin, with legend *Wu-chu,* found near ruin F. V.

XXV. COPPER COIN FOUND IN RUINED SHRINE, KARA-YANTAK.

(See above, p. 1262.)

1 Chinese coin of Ch'ien-yüan period (758–760 A. D.).

XXVI. COPPER COINS FOUND AT, OR BROUGHT FROM, 'TATI' SITES, N.W. OF DOMOKO.

(See above, p. 1264.)

a. **Coins found at sites near Ulūgh-mazār.**
1 Sino-Kharoṣṭhī coin (uncertain).
4 Chinese coins, probably of *Wu-chu* type or uninscribed.
1 Chinese coin of Ch'ung-ning period (1102–7 A. D.).

b. **Coins received as from sites N.W. of Domoko, batches Do. 0012–0016.**
5 Chinese coins, with legend *Wu-chu*.
2 Chinese T'ang coins, with legend *K'ai-yüan*.
3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).
1 Chinese coin of T'ien-hsi period (1017–22 A. D.).
1 Chinese coin of Yüan-fêng period (1078–86 A. D.).
1 Chinese coin of Ch'ung-ning period (1102–7 A. D.); see Pl. CXLI, No. 17.
1 Muhammadan coin, mediaeval.

XXVII. COPPER COINS BROUGHT AS FROM CHALMA-KAZAN SITE.

(See above, p. 1267.)

6 Sino-Kharoṣṭhī coins.
2 Chinese coins, with legend *Wu-chu*.
6 Chinese coins of Ch'ien-yüan period (758–760 A. D.).
2 Chinese coins of Ta-li period (766–780 A. D.).
1 Chinese coin, illegible, of T'ang period or later.

XXVIII. COPPER COIN FOUND AT KARA-SAI SITE.

(See above, p. 1273.)

1 Chinese coin, uninscribed or illegible.

XXIX. COINS FOUND AT, OR NEAR, TĀRISHLAK SITE.

(See above, p. 1279.)

a. Coins found within ruin Ta. i, ii.
1 Chinese coin, with legend *Wu-chu*.
1 Chinese coin, uninscribed.

b. Coins collected from 'Tati' S. of site.
8 Chinese coins, illegible, probably of late *Wu-chu* type.

XXX. COPPER COINS FOUND AT, OR BROUGHT FROM, MAZĀR-TĀGH SITE.

(See above, p. 1287.)

a. Coins found within ruined fort.
3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).

b. 1 Chinese coin of Ch'ien-yüan period (758–760 A. D.), found on path leading to fort.

c. Coins found in refuse layers below fort.
1 Chinese T'ang coin, with legend *K'ai-yüan*.
3 Chinese coins of Ch'ien-yüan period (758–760 A. D.).
1 Chinese coin of Ta-li period (766–780 A. D.).

d. Coins brought from Mazār-tāgh Site.
4 Chinese coins, with legend *Wu-chu*, much worn.
1 Chinese coin, of uncertain type, with four characters, two apparently meant for *Wu-chu*; see Pl. CXL, No. 35.
7 Chinese coins of 'goose-eye' type.

XXXI. COPPER COINS FOUND AT, OR BROUGHT FROM, DESERT SITES SOUTH OF KELPIN.

(See above, pp. 1306 sqq.)

a. **Coins found at Chong-tim Site.**
11 Chinese coins, of *Wu-chu* and 'goose-eye' types, much worn, found together close to fort.
3 Chinese coins, with legend *Wu-chu*.
1 Chinese T'ang coin, with legend *K'ai-yüan*.
2 Chinese coins of Ch'ien-lung period (1736–96 A. D.); see Pl. CXLI, No. 24.
1 Chinese coin of Chia-ch'ing period (1796–1821 A. D.).

b. **Coins found on 'Tati' S. of Chong-tim.**
1 Chinese coin, with legend *Wu-chu*.
4 Chinese T'ang coins, with legend *K'ai-yüan*.

c. **Coins purchased at Kelpin** as brought from Chong-tim Site.
1 Chinese coin, with legend *Huo-ch'üan*.
7 Chinese T'ang coins, with legend *K'ai-yüan*.
5 Chinese coins of Ta-li period (766–780 A. D.).

d. **Coins purchased at Kelpin** as brought from different sites, also from W. of Kudughun.
6 Chinese coins, with legend *Wu-chu*.
18 Chinese coins, of 'goose-eye' type.
1 coin, of Chinese type, but with non-Chinese (Mongol?) legend; see Pl. CXLI, No. 26.
6 Chinese T'ang coins, with legend *K'ai-yüan*.
1 Chinese coin of Ta-li period (766–780 A. D.).

XXXII. COPPER AND SILVER COINS FOUND ON 'TATIS' N. OF TUMSHUK.

(See above, p. 1309.)

2 Chinese T'ang coins, with legend *K'ai-yüan*.

1 Chinese coin of Ching-yu period (1034–38 A.D.); see Pl. CXLI, No. 8.

1 Chinese coin of Hsi-ning period (1068–78 A.D.); see Pl. CXLI, No. 11.

1 silver coin of Jāni Beg Khān (1340–57 A.D.), struck at Khwārizm, 743 A.H.; see Pl. CXLI, No. 32.

XXXIII. COPPER COINS BROUGHT FROM TOKUZ-SARAI RUINS, TUMSHUK.

(See above, p. 1309.)

16 Muhammadan coins of Muḥammad Arslān.

TABLE OF COIN SPECIMENS REPRODUCED IN PLATES CXL AND CXLI

PLATE CXL.

No.	*Description.*	*Reign, period, or legend.*	*Weight.*	*Place of find or purchase.*
1	Khotanese	Sino-Kharoṣṭhī	242·1 gr.	Khotan
2	do.	do.	61·8	do.
3	do.	do.	63·1	do.
4	do.	do.	48·7	Yōtkan
5	do.	do.	67·8	Yārkand
6	do.	do.	54	Yōtkan
7	do.	do.	46·8	do.
8	Indo-Greek	Hermaeus	Æ. 121·8	Karghalik
9	Indo-Scythian	Kaniṣka	52	Yōtkan
10	do.	do.	72·2	do.
11	Parthian	Mithradates I	Æ. 52·8	Karghalik
12	Byzantine	Constantine II	Æ. 42·5	do.
13	do.	Constans	Æ. 30	do.
14	Chinese	*Huo-ch'üan*	35	Khotan
15	do.	do.	72	Niya Site
16	do.	do.	37·5	Nan-hu
17	do.	do.	21·6	Lou-lan area
18	do.	do.	41·8	Lou-lan Site L.A.
19	do.	do.	20	do. do.
20	do.	do.	25·5	do. do.
21	do.	*Wu-chu*	47·5	Khotan
22	do.	do.	41·2	Lou-lan Site L.B.
23	do.	do.	56	Tun-huang Limes
24	do.	do.	54·4	do. do.
25	do.	do.	45	Nan-hu
26	do.	do.	36·4	Lou-lan Site L.A.
27	do.	do.	44·5	do. do.
28	do.	do.	43·3	do. do.
29	do.	Late clipped *Wu-chu*	19·1	do. do.
30	do.	do. do.	23·5	Lou-lan Site L.B.
31	do.	do. do.	15	Yōtkan
32	do.	do. do.	8·5	Lou-lan Site L.A.
33	do.	do. do.	5·2	do. do.
34	do.	do. do.	2·8	do. do.
35	do.	Uncertain *Wu-chu* type	27·4	Mazār-tāgh
36	do.	Late *Wu-chu* type	35·7	So-yang-ch'êng
37	do.	do.	24·4	Yōtkan
38	do.	Local, uncertain, lead	19·4	do.
39	do.	T'ang, *K'ai-yüan*	58·2	do.
40	do.	do.	65	Mīrān
41	do.	do.	59·5	Tun-huang Limes
42	do.	Ch'ien-yüan (758–760 A.D.)	109	Khotan
43	do.	do.	63·6	do.
44	do.	do.	62·1	Khādalik
45	do.	do.	112·4	Khotan
46	do.	Ta-li (766–780 A.D.)	44	do.
47	do.	do.	32·2	Yōtkan

PLATE CXLI.

No.	*Description.*	*Reign, period, or legend.*	*Weight.*	*Place of find or purchase.*
1	Chinese	Ta-li (766–780 A.D.)	63·3	Khādalik
2	do.	do.	36·5	do.
3	do.	Ch'ien-chung (780–784 A.D.)	33·9	do.
4	do.	T'ai-p'ing (976–984 A.D.)	52·6	So-yang-ch'êng
5	do.	Shun-hua (990–995 A.D.)	52·1	Yārkand
6	do.	Hsien-p'ing (988–1004 A.D.)	59·8	Nan-hu
7	do.	Hsiang-fu (1008–17 A.D.)	62	Ak-terek
8	do.	Ching-yu (1034–38 A.D.)	75·8	Tumshuk
9	do.	Huang-sung (1038–40 A.D.)	59·4	Nan-hu
10	do.	Chih-p'ing (1064–68 A.D.)	67	Khotan
11	do.	Hsi-ning (1068–78 A.D.)	64·7	Tumshuk
12	do.	do. do.	56·5	Yārkand
13	do.	Yüan-fêng (1078–86 A.D.)	108·7	Vāsh-shahri
14	do.	Yüan-yu (1086–94 A.D.)	63·2	do.
15	do.	Shêng-sung (1101–2 A.D.)	62·5	do.
16	do.	Ta-kuan (1107–11 A.D.)	55	Yārkand
17	do.	Ch'ung-ning (1102–7 A.D.)	188·4	Domoko
18	do.	do. do.	166·2	Yārkand
19	do.	Chêng-ho (1111–18 A.D.)	95	Mīrān
20	do.	Ch'ien-yen (1127–31 A.D.)	112·5	Khotan
21	do.	Shao-hsing (1131–63 A.D.)	95	do.
22	do.	Chêng-lung (1156–61 A.D.)	57·7	So-yang-ch'êng
23	do.	Ch'ien-lung (1736–96 A.D.) (Shensi mint)	64·6	Nan-hu
24	do.	Ch'ien-lung (1736–96 A.D.) (Ushi mint)	67·8	Chong-tim
25	do.	Hsien-fêng (1851–62 A.D.)	211·5	Yōtkan
26	Mongol	Mongol?	86	Kelpin
27	Muhammadan	Sulaimān Khāqān	57·2	Khotan
28	do.	do.	69·2	do.
29	do.	do.	81·8	do.
30	do.	Muḥammad Arslān	99	Togujai
31	do.	Khwārizm-shāh, 'Alā-al-Dīn (1199–1220 A.D.)	AV. 45·5	Khotan
32	do.	Jānī Beg Khān (1340–57 A.D.)	Æ. 25·5	Tumshuk
33	do.	Modern, of Yārkand	117·1	Khotan

APPENDIX C

NOTES ON THE PHYSICAL ANTHROPOLOGY OF CHINESE TURKESTAN AND THE PAMIRS

BY

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IN the *Journal of the Royal Anthropological Institute*, vol. xxxiii, 1903, p. 305, I was permitted by the kindness of Dr. M. A. (now Sir Aurel) Stein to publish the physical measurements which he had made in the villages of Khotan and Keriya during his first archaeological expedition in the Taklamakan desert in 1900–1. During his more recent expedition, in 1906–8, he secured a far more extensive series, which includes most of the towns and villages around the desert, and also certain tribes of the mountainous country to the west and south-west. The preliminary account of this second journey has already appeared (*Ruins of Desert Cathay*, 1912, London), and the extent and value of the archaeological discoveries made by him are admirably foreshadowed therein. When we consider the archaeological and geographical results alone, we cannot but be amazed at the energy and pertinacity of the man who accomplished so much in comparatively so short a time. But even these results do not represent the sum total of Sir Aurel's activities. In the midst of all his other work he found time to collect the measurements of over 600 individuals (ten separate measurements being taken on each subject) and to record their 'descriptive characters' as well. The deductions from these measurements he had kindly permitted me to examine and to publish with the accompanying notes in the *Journal of the Royal Anthropological Institute*, vol. xlii, pp. 450 sqq. They are now offered here in a final form, with the addition of the complete list of individual measurements, Table 1.

METHOD.

The following measurements were taken on practically all individuals, in accordance with the instructions published in the third edition of *Notes and Queries on Anthropology*:—(1) head-length; (2) head-breadth; (3) nose-length; (4) nose-breadth; (9) bizygomatic breadth; (9a) total facial length; (16) standing height; and (20) span of arms. In addition, two other measurements were noted: (U.F.L.) upper facial length, from nasion to alveolar point, and (H. Cir.) horizontal circumference of head, passing over glabella and occipital point. Besides these measurements, the following descriptive characters were recorded, also in accordance with *Notes and Queries*:— Colour of skin and eyes, presence or absence of the 'Mongolian fold', colour, character, and amount of hair, shape of face, shape of nose, and profession of the subject. From the measurements taken, the following indices have been calculated:—Cephalic, Nasal, Total Facial, Upper Facial, Stature-Span. In the facial indices the total facial length and upper facial length respectively are expressed as percentages of the bizygomatic breadth, according to a method frequently adopted, which, however, is not that given in *Notes and Queries*, where the converse is recommended. The stature-span index is obtained by reducing the span to a percentage of the stature. The absolutes and indices have been grouped according to tribe and village, and for each group the Means, Standard Deviations, Coefficients of Variability, and their probable errors have been calculated. In the subjoined paper these will be symbolized as follows:—M = mean; EM = probable error of M; σ = standard deviation; $E\sigma$ = probable error of σ; C = coefficient of variability; EC = probable error of C.[1] The various means, together with their probable errors and variabilities, are shown in Tables 2 to 8.

[1] S being the sum of each group of absolutes or indices, N the number of individuals composing the group, D the difference of each individual from the mean, SD the sum of these differences, and SD^2 the sum of the squares of the

In dealing with so large a number of means of absolutes and indices (fifteen in all) it is very difficult to estimate the extent to which one tribe may be related to another, especially as more than two elements appear to enter into the composition of the population as a whole. An attempt has therefore been made to assess the difference between each pair of tribes in the following manner. A pair of tribes is taken, and from the means and standard deviations of corresponding absolutes or indices (symbolized as M_1 and σ_1, and M_2 and σ_2, respectively) is obtained the fraction $\frac{M_1 - M_2}{\sqrt{\sigma_1^2 + \sigma_2^2}}$. This fraction we will call Δ, and when Δ has been found for each absolute and index for every pair of tribes, the various Δ's expressing the difference between each pair are added together. The total, which we will symbolize as $\Sigma\Delta$, may be termed the 'Differential Index', and expresses in a single term the sum of the differences existing between each pair of tribes. The $\Sigma\Delta$ for all pairs of tribes are shown in Table 8, and it may be added that where a $\Sigma\Delta$ contains among its factors a Δ which amounts to 1 or over, that $\Sigma\Delta$ is printed in italics.

In this connexion I must acknowledge the valuable assistance of Mr. H. E. Soper, of the Biometric Laboratory, University College, London. He is responsible for the calculations which have given M, σ, and C, and their errors, for all absolutes and indices except those relating to head-length, head-breadth, and the cephalic index; and has calculated all indices except the cephalic. Further, he has prepared the Tables 6 and 7, and it was he who suggested to me the formula for obtaining $\Sigma\Delta$. For the values excepted above, and for the calculations which have given $\Sigma\Delta$ for every pair of tribes, I must confess the responsibility, as well as for the handling of all *data* not obtained by Sir Aurel Stein.

Distribution of the People.

Furthest west are the Kafirs of Kafiristan (Fig. 8–10), of whom the greater number measured are cultivators, although nearly a third are herdsmen. North-east of the Kafirs are the people of Faizabad in Badakhshan, and a number of individuals from this locality were measured in Yarkand, whither they had travelled for purposes of trade. Between the Kafirs and Tashkurghan, almost in a straight line, are situated the Chitrali, the Mastuji (Figs. 7, 21), the Wakhi, and, around Tashkurghan itself, the Sarikoli (Figs. 22, 24). Practically all these are cultivators, and all, as well as the Kafirs, are mountain people. East of the Wakhi, in the mountains which fringe the south-western portion of the Taklamakan desert, are the Pakhpu (Fig. 23), practically all herdsmen; further east, still keeping to the high country, are the people of Nissa and Karanghu-tagh, inhabitants of penal settlements and therefore of very mixed composition. They are herdsmen in the main, but a fair number are cultivators. East of them, still in the high ground, are the people of Polur, purer than the last, and cultivators in the main. Descending to the edge of the desert, we find, to the north-east of the Pakhpu, the people of Kök-yar, mainly cultivators; north of Karanghu-tagh is Khotan, peopled chiefly by cultivators, with a sprinkling of artisans; north of Polur is Keriya, mainly herdsmen with a smaller number of cultivators; and, east of the last, Niya, entirely cultivators.

Returning to Kök-yar and proceeding north round the western edge of the desert, we find the people of Bagh-jigda, an outlying settlement of Yarkand, cultivators. Turning eastward along the northern edge of the desert we have the Dolans of Tumshuk, now agriculturists, but, until quite recently, herdsmen. North of them, and off the trade-route, are the people of Kelpin (Fig. 342), chiefly cultivators. Further north, in Uch-turfan, are the Kirghiz (Fig. 333), mainly herdsmen, and now little exposed to external influences. East of the last is Ak-su, situated on the main route, and often recolonized, agricultural in the main, but with a certain number of traders. Some way further east is the people of Korla, mainly agricultural, and, north-east of the last, Turfan (Fig. 264). The population here, principally agricultural, is probably rather mixed, since the dress is Chinese, though the people themselves have spoken Turki since the sixth century. Chinese influence is even more marked in Hami (Fig. 263), eastward of Turfan, since it is on the Chinese military route; the measurements are chiefly of cultivators. To the south are the cultivators of Tun-huang and Nan-hu, Chinese immigrants, to whom allusion is made below simply as 'Chinese'. Finally, west of the last, immediately west of Lop-nor, on the southern edge of the desert, are the Loplik and Charkhlik (Figs. 90, 91), the former being the remains of an old fishing population

differences; then $M = \frac{S}{N}$, $\sigma = \sqrt{\frac{SD^2}{N}}$, $EM = \frac{\cdot6745 \times \sigma}{\sqrt{N}}$, $E\sigma = \frac{\cdot6745 \times \sigma}{\sqrt{2N}}$, $C = \frac{\sigma \times 100}{M}$, $EC = \frac{\cdot6745 \times C}{\sqrt{2N}}$. With regard to EC, however, it should be added that in all cases except the cephalic measurements and index, the fraction given above has been multiplied by $\sqrt{1 + 2 \times \left(\frac{C}{100}\right)^2}$. The difference produced is inessential.

who practised practically no agriculture, the latter a mixture of agricultural colonists, coming mainly from Khotan. It should perhaps be noted that the professions given above are those of the individuals measured and not necessarily those of the different settlements as a whole.

Head-length.

Tables 2 *and* 7.—If the means of absolute head-length are seriated, it will be seen that extremes are constituted by the Ak-su (M = 174) and the Loplik (M = 194). Close to the Ak-su, at the lower end of the scale, come their geographical neighbours, the Kelpin, Kirghiz, and Dolan, together with the people of Faizabad. At the other end, the Chinese follow the Loplik, and the Charkhlik are not far off. The Kafirs are grouped among the longest heads, and the mountaineers generally show a tendency to long-headedness, the Pakhpu, Chitrali, and Mastuji falling all in a bunch. The Sarikoli, however, come lower down. The people of Khotan, Turfan, Korla, and the Wakhi fall close together about the centre.

Head-breadth.

Tables 2 *and* 7.—As regards this absolute, the extremes are the Chinese (146) and the Kirghiz (161). Near the Kirghiz are the Dolan, Kelpin, Faizabad, and Ak-su, somewhat overlapped by the Wakhi, Turfan, and Korla, who also fell together in the last table; in this case Khotan is lower down the scale. Among the lowest means are the mountaineers (except the Wakhi), the Kafir following upon the Chinese; in fact, in this case the Kafir separate the last from the Loplik. The rest fall in the middle of the scale.

Cephalic Index.

Tables 2 *and* 7.—In this the extremes are the Chinese (77) and Ak-su (89). With the latter are grouped the Kirghiz and Kelpin as the most brachycephalic, followed at a little distance by the Dolan and Faizabad. Towards this end of the scale also fall the people of Niya, Keriya, Korla, and Kök-yar. At the more dolichocephalic extremity the Chinese are followed by the Kafirs and other mountaineers except the Sarikoli, whose absolute head-length is rather low, and the Wakhi, who, as in their absolutes, fall nearer Turfan, Khotan, and Korla. Near the Chinese, among the most dolichocephalic, are the Loplik.

Having regard to the two absolute measurements of length and breadth, and the index, a propensity can be seen for the Kirghiz, Kelpin, Dolan, Ak-su, and Faizabad to fall to one end of the scale, and for the Chinese, Loplik, and mountaineers to fall at the other (except the Wakhi and Sarikoli). The rest, including the Sarikoli and the Wakhi, fall in the middle, with a tendency to overlap the first group, except in respect of absolute head-length, in which they are distributed fairly evenly along the whole scale. It must be remembered that the people of Karanghu-tagh and Nissa, though reckoned as 'mountaineers', are very mixed.

Nasal Length.

Tables 3 *and* 7.—The extremes are the Chinese (45) and Faizabad (54). Close to the latter come the Ak-su and Dolan, the Kirghiz and Kelpin falling this time about the middle of the scale. The mountaineers show great divergence; on the one hand, the Kafir and Mastuji have short noses, the Karanghu-tagh, Chitrali, Wakhi, and Nissa long noses. In the same way the people of Keriya and Niya show very low nasal lengths, and those of Kök-yar are high up the scale. The Loplik again approximate to the Chinese.

Nasal Breadth.

Tables 3 *and* 7.—Extremes, Chitrali (32), Dolan (40). This time the grouping, with one or two important exceptions, supports the general conclusions formed from the head-measurements. The mountaineers are at one end of the scale, the Dolan, Kelpin, and Kirghiz at the other. With the first are reckoned the Chinese, followed closely by the Loplik. The exceptions are as follows:—Ak-su and Faizabad fall in the middle instead of with the Dolan, etc.; Nissa and Karanghu-tagh fall at some distance from the hillmen of the Pamirs, and are grouped with Khotan, Kök-yar, Turfan, and Keriya; while the Wakhi and Sarikoli show the narrow noses characteristic of the neighbouring hill tribes. The position of the Bagh-jigda at this end of the scale should be noted.

Nasal Index.

Tables 3 *and* 7.—Extremes, Chitrali (64) and Niya (82). Again the Kelpin, Dolan, and Kirghiz fall near together, among the most platyrrhine, though this time Ak-su and Faizabad are at the other end of the scale,

near the mountaineers. It is interesting to note the rather high index of the Chinese, due almost entirely to the extreme shortness of their noses. Near them, though less platyrrhine, owing to their superior nasal length, are the Loplik. The Wakhi and Karanghu-tagh fall next one to another, both with a high degree of leptorrhinity. Turfan, Hami, and the Charkhlik hold a corresponding position among the platyrrhines.

On the whole the nasal measurements support the conclusions inferred from the head-measurements. The Kirghiz, Kelpin, and Dolan remain as members of a distinct group, though it is now seen that Ak-su and Faizabad differ from them in some respects. It should be noted, however, that their leptorrhinity is due to the great length of their noses, while that of the Chitrali, Sarikoli, and Kafir is the result of relatively extreme narrowness of nostril. The Wakhi show a belated tendency to group themselves in certain respects with their geographical neighbours, while Karanghu-tagh and Nissa display occasional affinities with the peoples of the desert fringe, Kök-yar, Polur, Khotan, Korla, etc. On the whole the Chinese and Loplik appear still to fall nearer each to the other than to the rest. Bagh-jigda displays occasional similarities to the mountaineers.

Facial Breadth.

Tables 4 *and* 8.—Extremes, Kafirs (116), Dolan (146). This is one of the most valuable characters of all, since the variation between people and people is very great, while the variability of the respective means is comparatively small. It is all the more pleasing, therefore, to find that the evidence of the head-measurements, as modified by that afforded by the nose-measurements, receives additional support. The mountaineer tribes, Mastuji, Chitrali, Pakhpu, Sarikoli, follow immediately upon the Kafir. At the other end Faizabad, Kirghiz, Kelpin, and Ak-su (with Polur intervening between the two last) follow the Dolan. Additional evidence of the relationship of Bagh-jigda with the Pamir mountaineers is afforded by their position between the Chitrali and Pakhpu; while the tendency of Nissa and Karanghu-tagh to approximate to the desert folk is exhibited by their position in the middle of the scale. The place of the Wakhi, between the most euryprosopic of the Pamir peoples and the most leptoprosopic of the desert population, is equally illuminating; and the Loplik take the position we might expect, about midway between the Chinese, with whom they have so often been related, and their neighbours the Charkhlik, who, in their turn, stand very near the people of Khotan, their principal mother-village.

Total Facial Length.

Tables 4 *and* 8.—Extremes, Loplik (111), Faizabad (121). This is not nearly so useful a character; there is little difference between the highest and lowest means, and their variability is comparatively very great. To follow the fortunes of the groups into which, on the evidence of former measurements and indices, the peoples seem to fall, the Ak-su come next to the Loplik, with a mean of 112, and are thus widely separated from Faizabad. The Dolan, Kelpin, and Khirghiz fall about the middle, the first in the direction of length of face, the two latter in the direction of shortness. The Pamir mountaineers, including the Wakhi, but not the Chitrali, show a tendency to mass themselves towards the short-faced end of the scale, and thus for the first time are brought into some relation with the Ak-su, Kelpin, and Kirghiz. Nissa also appears at this end, but Karanghu-tagh is at the other end, with Turfan, Khotan, Kök-yar, and Korla. To complete the confusion, the Chinese have a length 117, and are, therefore, some distance from the Loplik.

Total Facial Index.

Tables 4 *and* 8.—Extremes, Kirghiz (79), Kafirs (97). The evidence of this index is far more valuable, since the variability of M is much less; it is also more pleasant to contemplate, since it corroborates that afforded by the facial breadth, and we return to our original grouping. The Kirghiz, Dolan, Kelpin, and Ak-su appear as the most euryprosopic, with Faizabad very near. The Kafir, Chitrali, and Mastuji figure as the most leptoprosopic, followed closely by the Pakhpu and Sarikoli; Bagh-jigda falls between the last two. The desert population, including Karanghu-tagh and Nissa, occupy the middle of the scale, Polur and Keriya being the most euryprosopic, Hami and Kök-yar the most leptoprosopic. The grouping of the Loplik with the first pair and the Chinese with the second, however, shows that the difference between the two, as evidenced in their respective facial lengths, is significant.

Upper Facial Length.

Tables 5 *and* 8.—Extremes, Keriya (64), Kök-yar (70). Again, as with the total facial length, we have a small difference between means accompanied by great relative variability. The most interesting point lies in

the fact that the extremes are constituted by two members of the desert population. As in the case of the total facial length, the Pamir peoples on the whole mass themselves towards the lower end of the scale, while the Kelpin, Kirghiz, Ak-su, Faizabad, and Dolan are distributed in ascending order about the central portion. An important difference is constituted by the fact that the Chinese and Loplik in this case lie next one to another each with a high figure.

Upper Facial Index.

Tables 5 *and* 8.—Extremes, Kirghiz and Dolan (46), Chitrali (56). This index gives a verdict very similar to the total facial, with one very important difference, viz.: that the Chinese and Loplik are again brought closely together. This shows that the difference existing between them lies solely in the superior length of the chin among the Chinese. Again the Kirghiz, Dolan, Kelpin, Faizabad, and Ak-su form the most euryprosopic group, the Pamir people the most leptoprosopic, though the Sarikoli stand a little apart. Bagh-jigda also has a low index, and the Chinese an even lower. The desert folk occupy the centre of the scale, Polu extending into the euryprosopic portion, Kök-yar into the leptoprosopic. Nissa and Karanghu-tagh are on the leptoprosopic side of the centre, as is also Hami, doubtless, as regards the latter, owing to the influence of the Chinese.

Head-Circumference.

Tables 5 *and* 7.—Extremes, Kök-yar (537), Loplik (576). Here M shows great variation, which unfortunately is obviated by an almost more than proportional variability. The Chinese and Loplik fall together, but the Pamir peoples are divided into two, the Mastuji, Kafir, and Chitrali showing a high figure, the Pakhpu and Sarikoli a low. The members of the Kirghiz group are distributed at intervals about the central portion. Owing, however, to the great variability, due possibly in part to the difficulty of making accurate measurements, the evidence afforded by these figures is not of great value.

Stature.

Tables 6 *and* 8.—Extremes, Nissa (160), Loplik (170). Also a measurement of no great value, owing to the slight variation of M and its great individual variability. The Ak-su, Kirghiz, Dolan, and Kelpin form a group on the short side of tne centre. The Pamir peoples and the desert folk are distributed fairly equally along the whole line. All that can be said is that the former tend to mass towards the tall end, the latter towards the short.

Span.

Tables 6 *and* 8.—Extremes, Nissa (160), Faizabad (173). Again the Pamir mountaineers show a wide distribution, with a tendency to mass towards the higher end of the scale. This tendency is even more marked among the Kirghiz group, while the desert peoples are nearly all at the other end. The Chinese and Loplik show considerable divergence.

Stature-Span Index.

Tables 6 *and* 8.—Extremes, Keriya (99), Kelpin (104). This shows a result more in accordance with the more important measurements. With the Kelpin are grouped Faizabad, Kirghiz, Ak-su, and Dolan, all having a high index. This group is overlapped by Bagh-jigda, which is followed by the Pamir peoples, Kafir, Mastuji, Chitrali, Sarikoli, Wakhi, and Pakhpu, in their turn overlapped by Kök-yar, Charkhlik, and Niya. The Loplik and Chinese fall towards the other end, and beyond them come Karanghu-tagh and Nissa.

The Differential Index.

Table 9 shows the $\Sigma\Delta$ for each pair of tribes, obtained as described on p. 1352. Any $\Sigma\Delta$ which contains among its factors a Δ amounting to 1, or over, is printed in italics, unless the Δ which reaches a whole number is that derived from the head-circumference. An exception has been made in this case owing to the great individual variability of this measurement. Another exception is furnished by the $\Sigma\Delta$ for Keriya and Niya. In this case Δ for the stature-span index is 1·00, yet the M for Keriya is calculated from only five individuals, and the variability of this measurement is great in proportion to the small difference which exists between the extremes. Moreover the population respectively of Keriya and Niya show remarkably little difference in other respects

(since the ΣΔ, in spite of the fact that one of its fifteen factors is a whole number, is only 3·64); consequently their ΣΔ has been printed in ordinary type, and it may be allowed that a close relationship exists between them.

Let us first regard the table from the point of view of similarity. The lowest ΣΔ is that for Turfan and Korla, which, though it contains fifteen factors, amounts only to 2·03. This remarkably low figure shows clearly that the populations of the two localities are not merely closely related but practically identical. Two other ΣΔ fall below 3, viz. Turfan and Khotan (2·98) and Kirghiz and Dolan (2·84), and indicate nearly as close a relationship between these pairs of tribes relatively. (See Table 10, which shows more clearly the inter-relation of the various tribes; names in italics indicate that the ΣΔ contains a Δ as factor which amounts to 1·00 or over with the exceptions noted above.) If the ΣΔ is raised to 4, we find that the Dolan, Kelpin, and Kirghiz form a closely-related group of three, that the Wakhi are related to Turfan, that Keriya pairs with Niya, and Bagh-jigda with the Sarikoli. To anticipate, therefore, we have the nuclei of three groups, the Kirghiz group, the Turfan group, to which one mountain people, the Wakhi, are closely related, and the Pamir group, with an outlying branch at Bagh-jigda. If the ΣΔ be raised to 5, these groups materialize more distinctly. It is now seen that Turfan, Korla, Khotan, and Wakhi are all inter-related by ΣΔ under 5; and that Turfan, Korla, and Hami stand in similar relationship. Further that Sarikoli, Bagh-jigda, and Pakhpu constitute a similar group; while the Kirghiz-Kelpin-Dolan group remains unchanged. For convenience the first group will be called the Desert group (although it includes the Wakhi); the group containing the Sarikoli, the Pamir group; and the last, the Kirghiz group. Now if we look at the Mastuji we see that they are related to the Pamir group through the Sarikoli, and have, besides, affinities with the Kafir and Chitrali; again, it is apparent that the Pamir group is brought into contact with the Desert group owing to a relationship existing between the Pakhpu and Hami, while Kök-yar and Polur show a connexion with the Desert group through Khotan, and Karanghu-tagh through Hami. Other close relationships are those between Karanghu-tagh and Nissa, and between Loplik and Charkhlik.

If the limit of the ΣΔ be raised to 6, we find that the Mastuji can be related with the Bagh-jigda as well as the Sarikoli, and though their ΣΔ as regards the Pakhpu is over 6, being in fact 6·27, yet the excess is so small that we may fairly regard them as belonging to the Pamir group. The ΣΔ for the Kafir and Chitrali falls below 6, being 5·92, but the Δ for the nasal length is 1, and the relationship cannot, therefore, be regarded as so close as that existing between each and the Mastuji. As regards the Desert group, we find this now constituted by Turfan, Korla, Wakhi, Charkhlik, and Khotan, or by the first four and Hami. The ΣΔ for Hami and Khotan is 6·62, and the factor which brings it above 6 is that for the facial index, 1·33, due to the fact that the people of Khotan are considerably more euryprosopic. Further connexion between the Pamir and Desert groups is seen in the relation of the Mastuji with the Wakhi and of the Sarikoli with Turfan. Kök-yar, which has already been shown to possess affinities with Khotan, now becomes related to the Wakhi, and also with the Pamir group through the Sarikoli; Keriya becomes attached to the Desert group through Khotan and Turfan, while similar relationships are seen to exist between Nissa and Hami, between Karanghu-tagh and the Loplik, and between the latter and the Chinese. The Kirghiz group also receive an addition in the Ak-su, who become related to the Kelpin and Dolan, their ΣΔ as regards the Kirghiz themselves being only just over 6, viz. 6·20. This excess is due solely to head-circumference, which, as has been shown, does not afford trustworthy evidence. As yet this group has shown no relationship to either of the others, but, as a matter of fact, it lies far nearer to the Desert group than to the Pamir group. The ΣΔ of Ak-su and Kelpin only just misses inclusion in the present limit, being 6·20, and containing no factor over 0·90; ΣΔ for Keriya and Kelpin, too, is only 6·82, though in this case Δ for the stature-span index amounts to 1·67. Other affinities, besides those already mentioned, appear between the Pamir and Desert groups, though in each case the ΣΔ contains a Δ of 1 or over; they are the following, the words in brackets indicating the particular in which Δ attains or exceeds unity: Pakhpu and Karanghu-tagh (facial breadth), Pakhpu and Polur (facial breadth), Pakhpu and Nissa (facial breadth and stature-span index), Sarikoli and Hami (nasal breadth), Sarikoli and Khotan (facial breadth). It is obvious from this that the main particular in which the two groups differ is facial breadth, but that in the case of the Wakhi this difference does not occur. It is interesting to note that the average of the ΣΔ of the Wakhi is the lowest, and never attains 10.

One people, that of Faizabad, has not been related at present to any other, and it is a fact that in no case has it a ΣΔ which does not contain a factor under 1. Its lowest ΣΔ are with Khotan (6·59, Δ for span and stature-span index being over 1) and with Ak-su (6·73, Δ for facial breadth and head-circumference being over 1).

Its position is perhaps midway between the Desert and Kirghiz groups, with a slight leaning towards the latter, owing to the great variability of head-circumference.

Table 11 shows the inverse order of relationship of the various peoples, and perhaps the differential index affords a better indication of remoteness than of affinity. The highest $\Sigma\Delta$ exists between the Kafir and Dolan, viz. 16·28; and, as far as $\Sigma\Delta$ of 13 and over are concerned, the antithesis between the Pamir group and the Kirghiz group, and between the latter and the Chinese, alone appears. It is true that the names of Karanghu-tagh and Nissa occur, but these, as we have seen, have a very mixed population, and it is evident that the population contains a large Pamir element. With regard to $\Sigma\Delta$ of 12 and over, we find certain of the Desert group, viz. Khotan, Keriya, and Korla, opposed to the Kafir. As we have seen that the Pamir group have a certain relationship with the Desert group, we may take it that the Kafir, who are after all only related with the former through the Mastuji, constitute an extreme, and bear a certain relationship to some people whose influence does not extend as far as the desert. The Loplik, too, appear as widely divergent from the Kirghiz group, as might be expected owing to their relationship with the Chinese. The difference, which tends to separate the people of Faizabad from the Pamir peoples and the Chinese, accentuates the traces of relationship which have already been found for them with the Kirghiz group. It is unnecessary to pursue the investigation further in great detail, but attention may be called to one or two points. When $\Sigma\Delta$ of 10 and over are considered, it is seen that the Chinese, who have already shown a divergence from Niya, are differentiated from Keriya, and, what is more important, from Korla, one of the Desert group. Among the Pamir group the Chitrali must be regarded as influenced by some extraneous element, probably that which enters into the composition of the Kafir, since they are brought into opposition with Turfan and Korla. Kök-yar, which has been related most closely with Khotan, and next with the Sarikoli, is differentiated from the Kafir, Kirghiz, and Loplik, the last being, as we know, closely related to the Chinese. To establish the position of the last named and of the Wakhi, it is necessary to consider the $\Sigma\Delta$ of 9 and over. We then find that the Chinese are widely separated from the Kirghiz and Desert groups; that they are not related to the Pamir peoples is evident from the fact that their $\Sigma\Delta$ for the Chitrali and Sarikoli are over 8. They, therefore, constitute an extreme. As for the Wakhi, they are shown to have no relationship with the Kirghiz group by being opposed to the Kirghiz themselves, while their $\Sigma\Delta$ for the Kafir is over 8. The position of Keriya and Niya is interesting. They show the greatest divergence from the Pamir group and the Chinese, but differ, though in a lesser degree, from Faizabad and the Dolan. Keriya, however, has been shown to bear some sort of relationship to Kelpin, while its $\Sigma\Delta$ for the Charkhlik, one of the Desert group, is over 8. Keriya probably, therefore, occupies an intermediate position, or, together with Niya, which is further removed from the Kirghiz group, contains some extraneous element. The $\Sigma\Delta$ of Faizabad and the Kirghiz, which is over 8, shows that the former cannot be definitely included in the Kirghiz group, and, therefore, probably stands half-way between the latter and the Desert group, especially as it bears some slight affinity with Khotan.

Conclusions from the Measurements.

The foregoing examination would seem to establish the fact that the various peoples with which this paper deals may be divided into four groups. First, a group of mountain folk, all closely allied, in the extreme west of the area under consideration. The nucleus of the group is formed by the Sarikoli, Mastuji, and Pakhpu, with an easterly extension into the Desert area in the shape of the Bagh-jigda. Closely akin to them are the Chitrali and Kafir, who, nevertheless, exhibit certain differences without approaching any of the other peoples, and, therefore, probably contain some element foreign to this district. Second, a group of desert peoples, the nucleus of which is composed of Turfan, Khotan, Korla, and Charkhlik. This group has a westerly extension into the mountains in the shape of the Wakhi; it possesses certain affinities with the peoples forming the nucleus of the former group, and the inhabitants of some localities, such as Kök-yar and the mixed populations of Karanghu-tagh and Nissa, appear to stand half-way between the two. With the Desert group should be classed the people of Polu and the rather mixed population of Hami; Niya and Keriya also have some affinity with certain of its members, but seem to contain some other element also. However, their apparent aloofness may be due to the small number of measurements available. The third group, one which is very distinct, is formed of the Kirghiz, Kelpin, Dolan, and Ak-su. Traces of relationship with the Desert group, however, are not wanting, though these are slight, and the people of Faizabad may represent a mixture of the two elements, or, indeed, all three, Pamir, Desert, and 'Turki'. The fourth group, the Chinese, seems to stand practically alone, though the Loplik are

evidently related to them, and so form a connecting link with the Desert peoples. The most interesting point about the Chinese is their obvious differentiation from the Kirghiz, who have been said to be the nearest related to the Mongolians of all Turki peoples. A possible explanation is not very far to seek, however; if the measurements given by Deniker in *The Races of Man* be considered, it will be seen that the data collected among the people of Nan-hu and Tun-huang correspond very closely with those quoted by him for the Northern Chinese, while the measurements of the Kirghiz and Dolan approximate very closely to those given for various Southern Mongolian peoples, with the exception of the stature. It may well be that the Kirghiz group represent a blend of the Southern Mongolian with the 'Turkish' stock.

Descriptive Characters.

It will be as well to survey shortly the descriptive characters of the peoples here studied, though material of this nature is less exact and more difficult to handle than actual measurements. In the first place, the eye of the observer must be influenced by an unconscious tendency to make comparisons with the last people studied; in the second, the reduction of data to percentages, the only method which renders comparison possible, is apt to be misleading when the number of observations is few, as in the case of Faizabad, Korla, Bagh-jigda, Ak-su, and Nissa.

Skin-colour. Table 12.—In all cases, with two exceptions, the bulk of the population falls under the head of 'white-rosy'. The exceptions are the Dolan, of whom 75 per cent. are 'brownish-white', and the Chinese, with 65 per cent. 'yellow'. The Kirghiz, Kelpin, Faizabad, and Ak-su have respectively 42 per cent., 26 per cent., 25 per cent., and 23 per cent. 'brownish-white,' and the Kelpin and Ak-su 7 per cent. and 15 per cent. 'yellowish-white' also. The only peoples who contain a definitely 'brown' element are the Kafir, 22 per cent.; Karanghu-tagh, 8 per cent.; and Mastuji, 4 per cent. (with another 4 per cent. 'brownish-yellow'), two of them being classed by their measurements as belonging to a definite group, and one as having affinities with that group. The other tribes are either entirely 'white-rosy' (the rest of the mountain folk belong to this category) or 'white-rosy' in the main with varying percentages of 'brownish-white' and 'yellowish-white'. Korla and Turfan, both of which have been subjected to Chinese influences, have small percentages of 'yellows'.

Hair-colour. Table 13.—The individuals have been grouped under three headings: (*a*) black, (*b*) dark-brown, (*c*) medium and fair. In six cases the bulk of the population is black-haired; the Chinese (75 per cent.), Kirghiz (50 per cent.), Kelpin (47 per cent.), Korla (46 per cent.), Nissa (44 per cent.), and Loplik (40 per cent.). The Dolan have an equal percentage (44 per cent.) of blacks and dark-browns. The Chinese, therefore, and the members of the Kirghiz group show a tendency, most marked in the case of the first, towards nigrescence; the Loplik naturally have been affected by the Chinese. The small number of Nissa observations (9) invalidates the figure for this people. One people only, that of Niya, has the bulk of its population medium (47 per cent.); other tribes which show a tendency towards fairness are: Pakhpu (32 per cent. medium or fair and no blacks), Wakhi (32 per cent.), Karanghu-tagh (31 per cent. and no blacks), Sarikoli (30 per cent.), Kafir (28 per cent.), Kök-yar (26 per cent.), and Loplik (26 per cent., though here, as we have seen, the bulk of the population is black-haired). As regards the rest generally, the other members of the Pamir group have a very high percentage of dark-browns; the Desert folk a lower percentage of dark-browns, with a higher percentage of blacks, and in a few cases, of mediums.

Hair-quality. Table 13.—Three categories, straight, wavy, and curly. This gives interesting results; the Chinese show 95 per cent. straight. The Kafir, in the matter of skin- and hair-colour so far removed from them, alone of the rest display a straight-haired element (28 per cent.), for the one straight-haired individual at Khotan may be regarded as negligible. Ak-su, Kelpin, Dolan, and Kirghiz are entirely wavy-haired, and Faizabad shows 83 per cent. wavy, the rest curly. With the exception of a single wavy-haired individual at Keriya, the remaining Desert and Pamir peoples are entirely curly. This result gives strong support to the measurements, and implies the isolation of the Chinese, the approximation of the Pamir and Desert groups, the presence in the Kafir of some foreign element, probably derived from the west, the specialized character of the Kirghiz group, with the people of Faizabad standing between them, on the one side, and the Desert and Pamir populations on the other.

Hair amount (face). Table 13.—Two categories: (*a*) abundant and moderate; (*b*) scanty and nil. Shaven individuals are, of course, not included. In this respect the mountain peoples fall in the first category, with

the exception of the Pakhpu, who show 8 per cent. scanty. Again the Chinese constitute an extreme with 70 per cent. in the second category (50 per cent. being 'nil'). The Kirghiz stand near them with 71 per cent. in the second category (11 per cent. being 'nil'). The hair-growth of the rest of the Kirghiz group appears to have been affected by the neighbourhood of the Desert population, the figures being: Ak-su, 46 per cent. (*b*); Dolan, 25 per cent. (*b*); Kelpin, 14 per cent (*b*); Faizabad, 8 per cent. (*b*). However, the Desert people themselves display an occasional glabrous tendency, which is accentuated in such places as Hami (47 per cent.) and Turfan (54 per cent.), where Chinese influence appears in the ethnography, and it is possible that the comparative hairiness of Faizabad is due to some affinity, of which traces have been seen before, with the Pamir peoples. The Loplik stand near the Chinese with 63 per cent. of individuals with glabrous tendencies, but the position of the Charkhlik, with 67 per cent. of such individuals, is rather surprising; also that of Kök-yar (31 per cent.), who have hitherto been regarded as a Desert people with a tendency to approximate in some particulars to the mountain folk.

Eye-colour. Table 14.—Three categories, dark, medium, and light (including blue). On the whole the Desert peoples seem to have the most deeply pigmented eyes, though the light hair seen at Niya is accompanied by 30 per cent. of light eyes. At Ak-su, Polur, Hami, Korla, and among the Charkhlik and Dolan, no light eyes are found, and, except in the last case, 50 per cent. or more of the population is dark-eyed. On the other hand, among the Pamir peoples, the Chitrali and Bagh-jigda have no dark eyes, and the highest percentage of the latter, occurring among the Mastuji, is only 14 per cent. Among the Kirghiz and Kelpin the bulk of the population is medium-eyed, with a large percentage of dark eyes and a small percentage of light. The Chinese are mainly dark-eyed (45 per cent.), but a fair sprinkling (15 per cent.) of blue eyes is found. At Nissa and Turfan the great majority of individuals are dark-eyed, but, as regards the rest of the Desert population (except Niya and the places already mentioned), medium eyes are in the majority, though a heavy percentage of dark eyes and a small percentage of light are observable.

'*Mongolian fold.*' *Table* 14.—As regards the fold over the caruncle, the Chinese lead the way with 44 per cent., and Turfan, long exposed to Chinese influence, is second (19 per cent.). Korla, otherwise closely related to Turfan, is third (15 per cent). The Loplik show a percentage of 10, in which the fold or traces of it have been observed; and traces also occur at Hami and Keriya. With regard to the Kirghiz, though the fold itself is said to be absent, yet 37 per cent. of the individuals measured were said to have 'Mongolian eyes'. This character is interesting as showing the limited extent of Chinese influence in the area under consideration.

The other 'descriptive characters', shape of face and nose, give practically no results.

Comparison with Other Peoples.

In order to attempt to fix more definitely the racial affinities of the peoples under discussion, it will be well to consider the physical characteristics of one or two peoples to the west and south. For this purpose I have calculated $\Sigma\Delta$ between all tribes mentioned above and the following (see Tables 15, 16): 58 Galcha,[2] a primitive Iranian people inhabiting the mountain district of Karateghin; 80 Pathans,[3] representatives of the Indo-Afghan race; 60 Biloch,[3] also Indo-Afghans, with a strong affinity with the Iranians (Deniker); 44 Dards[4] (Yeshkuns and Chins of Dardistan), whose root-stock is Indo-Afghan (Deniker), though the Yeshkun language has affinities with Turki (Biddulph);[5] 31 Ladakhi,[4] on the Tibetan border; and 38 Tibetans of Tibet.[3] The $\Sigma\Delta$ have been calculated from the following measurements and indices: head-length, head-breadth, cephalic index, nasal length, nasal breadth, nasal index, stature. As regards the Galcha, however, Ujfalvy does not give the nasal breadths, and consequently this measurement and the nasal index cannot be included.

The Galcha.—Table 16 shows the $\Sigma\Delta$ for the Galcha and all other tribes mentioned; Table 17 the degree of relationship between the Galcha and other tribes. Names and figures in italics signify that the $\Sigma\Delta$ contains a Δ reaching 1 or over. It can be seen at once that, as far as the measurements available are concerned, the Galcha seem closely allied to two very distinct groups, the Wakhi and Desert folk on the one side and the Kirghiz group on the other. Unfortunately, Ujfalvy does not give the bizygomatic breadths of the individuals

[2] Ujfalvy, *Mission scientifique en Russie, Sibérie, et dans le Turkestan*, vol. i.

[3] Risley, *Tribes and Castes of Bengal.*

[4] Ujfalvy, *Aus dem westlichen Himalaja.*

[5] It is worth noting that the languages respectively of Kafirs, Chitrali, and the Dard group as a whole display considerable affinity.

whom he measured, but from indications afforded by hair- and eye-colour it is obvious that the Galcha are very closely allied to the Wakhi, and stand in closer relation to the Pamir peoples than to the Kirghiz group. Their percentages are as follows, and can be compared with Tables 13 and 14. *Hair*: black, 9·4 per cent.; dark brown, 50·2 per cent.; red, 1·9 per cent. (one individual); medium and fair, 37·7 per cent. *Eyes*: dark, 11 per cent.; medium, 60·3 per cent.; light, 20·7 per cent. The $\Sigma\Delta$ shows that the Galcha are definitely opposed to the Chinese, the Ladakhi, and the Indo-Afghans. The fact that the $\Sigma\Delta$ for the Kafir is 4·97 indicates that the element which differentiates the latter people from the Pamir folk proper is evidently not Iranian.

Pathans.—The affinities of the Pathans in terms of $\Sigma\Delta$ are shown in Tables 16, 18, and 19. As regards resemblances, the connexion of the three Indo-Afghan peoples is at once obvious; moreover, the fact that the $\Sigma\Delta$ for the Kafir falls under 3·50, taken with the further fact that Table 18 shows the Pathan to be far removed from the Kirghiz group and from several important tribes of the Desert group, leads us inevitably to the conclusion that the element which differentiates the Kafir from the Pamir and Desert peoples is Indo-Afghan.

Biloch.—The same three tables show the affinities of the Biloch, whose higher degree of brachycephaly brings them into relation with the Sarikoli and Mastuji. It has been shown that the Mastuji are closely related to the Kafir, and the Sarikoli to the Mastuji. We may conclude, therefore, that the Biloch contain an appreciable Iranian element, and, possibly, that the Mastuji and Sarikoli may possess a slight, but very slight, Indo-Afghan strain. The latter supposition is problematical, but receives a little support from the fact that these two tribes have on the whole darker hair than the Wakhi, who seem to stand nearest to the comparatively pure Iranian as exemplified in the Galcha.

Dard.—The most interesting point with regard to this people is that they appear closely related to the Chitrali, while their comparatively low $\Sigma\Delta$ for the Kafir, 3·10, is invalidated by a Δ of 1·40 for the nasal length. Now, it will be remembered that the $\Sigma\Delta$ for the Kafir and Chitrali was only 5·92, but that Δ for the nasal length was 1·00. We find, therefore, that the Dards differ from the Kafir in the very same respect as the Chitrali, though to a greater degree. The averages for the absolutes are: Dards, 53; Chitrali, 51; Pathan, 50; and Kafir, 46. It is evident that some strain of Indo-Afghan blood enters into the composition of the Chitrali, and it is difficult to account for the shortness of nose among the Kafirs, a characteristic which is shared, though to a less degree, by the Sarikoli and Mastuji. This shortness of nose cannot be due to Galcha influence, since the average of that people is 52. Measurements of more of the surrounding tribes are necessary before this point can be elucidated. The Dards show a considerable dissimilarity to the Kirghiz and Desert groups.

Ladakhi.—It is clear that we are badly in need of the facial measurements to define accurately the relation of the Ladakhi to the tribes under discusssion. As far as the measurements obtainable go, this people show affinities with certain of the Pamir group, of the Desert group, and the Chinese and Loplik. At the same time they display a definite divergence from the Kirghiz group. They are probably a very mixed people, and contain Indo-Afghan, Tibetan, and possibly Pamir elements.

Tibetans.—The most noticeable point about the Tibetans is that their $\Sigma\Delta$ in relation to all tribes is very low. It is strange that the highest should be that expressing their relation with Niya, one of the villages of the southern desert, which appears to be an aberrant member of the Desert group, and which might be supposed to owe its peculiarities to Tibetan influence. On the other hand, there seems to be some kinship between the closely inter-related members of the Desert group and the Tibetans, as was suggested, with respect to Khotan, in my previous paper, to which allusion has been made above.

Final Conclusions.

To sum up, the measurements show that the majority of the peoples surrounding the Taklamakan desert have a very large common element. Further, that this element is seen in its purest form in the Wakhi. The fact that the Wakhi display so close a relationship with the Galcha proves that the basis of the Taklamakan population is Iranian. At the north-western edge of the desert an intrusive element, which can be sharply differentiated from the Iranian, makes its appearance—the Turki element. Besides this there seems to be some common bond between the peoples of the desert and of Tibet. This probably means that the Iranian element has penetrated to Northern Tibet, though it is not unlikely that Tibetan (modified Mongolian) influence has been exercised, *to a slight degree*, upon the Desert peoples. In any case the relationship with Tibet requires

confirmation by more measurements taken in the latter country. In the Pamirs is a series of tribes, who, though chiefly of Iranian stock, begin to exhibit slight traces of Indo-Afghan blood. In at least one tribe, the Kafir, these traces are considerably more than slight. The Chitrali also seem to stand in closer relationship to an Indo-Afghan people (but a rather specialized Indo-Afghan people) than the other Pamir tribes. Some admixture has taken place between the Turki and Desert folk. In the case of Ak-su the Turki element predominates. In the cases of Niya and Keriya, who should be classed as rather aberrant members of the Desert group, it seems probable that their departure from the norm is due to Turki admixture. Faizabad appears to be a mixture of all three groups, Pamir, Turki, and Desert; and this is what might be expected. The root-stock of the population would thus be Iranian, though it has been exposed to Turki influences since Indo-Scythian times, and has thus become somewhat modified. In the East, Chinese influence begins to make itself felt, but only over a very restricted area. Hami, Turfan, and Korla have been thus affected, and it is not unlikely that the Desert people have had some corresponding though perhaps slight effect upon the population of Nan-hu and Tun-huang. The position of the Loplik is a little difficult to fix. I am inclined to regard them as a very early Mongolian offshoot, who found their way into the Loplik marshes long before Nan-hu and Tun-huang were colonized by Chinese of kindred stock. Owing to long residence they have become affected by contact with the Desert folk. The other alternative is to regard them as a Desert people affected by contact with the Chinese, but, having regard to the slight effect which Chinese influence has had upon Hami and Turfan, in spite of long contact (which has greatly modified their ethnography), I think this is not nearly so probable. The great differentiation of the Chinese and Turki groups is interesting, since both are regarded as 'Mongolian'. It is evident that they belong to widely different branches of the Mongolian race, and it must be concluded that the Turki are allied to the Southern Mongolian, the Chinese of Nan-hu and Tun-huang (and also probably the Tibetans whose measurements are given) to the Northern Mongolian stock. If this is so, and the Turki peoples do, in fact, contain a large Southern Mongolian element, their stature has been greatly increased in the course of their wanderings, by contact, probably, with Iranian peoples. This leads us to the question to what extent we may regard the Turki as a distinct branch of Mongolians, and whether it would not be more correct to look upon the various tribes which fall under this heading as being originally mixtures, in varying proportions, of Mongolian and Iranian elements, which time has reduced to comparative homogeneity. Finally, the point which emerges most clearly from the welter of measurements and descriptive data contained in this paper is this: that the original inhabitant of the Pamirs and Taklamakan Desert, including the cities now buried beneath the sand, is that type of man described by Lapouge as *Homo Alpinus*, with, in the west, traces of the Indo-Afghan; and that the Mongolian has had very little influence upon the population. In using the term *Homo Alpinus*, I wish it to be understood that I employ it merely as the name of a certain type already described, and do not necessarily imply that the actual population of the Alps is closely allied to the population of Chinese Turkestan.

In conclusion, I will quote from my previous paper (already cited) the description of these types:—

> '1. A white-rosy race, very brachycephalic, stature above the average, with thin, prominent nose, varying from aquiline to straight, long, oval face, hair brown, usually dark, always abundant and wavy (I think this should now be altered to curly), eyes medium in the main. This is Lapouge's *Homo Alpinus*.
>
> '2. A race, also white, but with a slight tendency to brownish, also very brachycephalic and with stature above the average, nose broader and usually straight, cheek-bones broad, hair straighter, darker, and less abundant, eyes dark. The "Turkish" race.
>
> '3. A brown, mesaticephalic, tall type, thin, prominent, and aquiline nose, long, oval face, black, wavy hair, dark eyes. This race may be termed the Indo-Afghan.
>
> '4. A brownish, brachycephalic race, stature under the average, nose straight, thick, and broad, black, wavy hair, little on face, brown eyes. The Tibetans.' (I now doubt whether the Tibetans can be said to constitute a race; there seems to be a great difference between the inhabitants of Northern and Southern Tibet respectively, a difference which corresponds in the main to that between the Northern and Southern Mongolian. Possibly the population of Tibet consists of both the latter elements, with an infiltration from the desert of modified Iranian in the north. More information, however, is necessary before we can speak of Tibet as a whole.)
>
> '5. A yellowish, brachycephalic, short race, short, flattened nose, with broadish nostrils, straight or concave, short, broad face, straight, black hair, scanty on face, dark, oblique eyes, with fold covering the *caruncula*. The (Southern) Mongolian race.'

TABLE I. LIST OF

Group	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20]
	22	Samer	30	Padamuk	183	143	42	34	99	102	58	546	1580	1650
Kafir	23	Kunmin	25	Shudgol	196	151	50	31	119	119	66	590	1700	1790
	24	Koli	38	Ludde	195	155	52	29	114	120	69	585	1750	1760
	25	Chandlu	50	,,	195	159	50	30	123	120	65	560	1670	1740
	26	Barmokh	38	Bombrad	199	148	54	30	114	118	71	558	1700	1710
	27	Matong	20	Ludde	192	149	38	33	111	101	60	556	1680	1740
	28	Marak	35	,,	194	145	45	28	112	96	62	560	1670	1800
	29	Shash	47	,,	195	154	51	30	123	116	69	590	1640	1750
	30	Maliki	45	,,	191	152	49	34	113	104	61	570	1730	1740
	31	Faush	45	Rumbur	185	142	44	34	115	108	63	540	1610	1620
	32	Razek	49	Bombrad	186	145	44	33	117	114	61	540	1610	1620
	33	Maghyai	43	,,	195	144	46	37	121	116	69	552	1820	1840
	34	Sashar	45	Rumbur	195	155	46	39	120	109	58	565	1750	1780
	35	Urus		,,	196	147	45	33	128	128	67	550	1650	1660
	36	Chundurwek	44	Bombrad	191	132	44	34	115	117	59	510	1610	1630
	38	Dawan	50	Rumbur	186	144	45	39	117	117	63	530	1660	1640
	39	Khan		Bombrad	180	142	42	34	116	114	63	526	1590	1620
	45	Kaidar Jan	26	Ashreth	182	132	44	31	112	110	66	526	1600	1650
Chitrali	3	Muggaddas	46	Yasin	194	155	43	36	122	113	64	560	1640	1720
	4	Nur Ahmad	30	Chitral	187	141	48	30	124	113	69	535	1710	1790
	4a	Ghulam	42	Ayum	194	156	55	32	124	131	76	570	1580	1680
	5	Muhd. Kabir Khan	35	Kusht	180	152	52	33	129	113	70	550	1740	1730
	6	Niyat Shah	60	Ayum	189	147	49	32	116	116	65	545	1670	1720
	7	Shaurs Panah	37	Kusht	194	162	52	31	127	120	72	580	1790	1840
	8	Bilwar	25	Chitral	187	151	56	32	114	121	72	560	1730	1770
	9	Gul Azam Khan	25	Mulkho	187	128	49	30	122	120	68	550	1670	1630
	10	Ji	30	Sart	182	151	51	31	121	122	69	570	1760	1850
	11	Shahdoni Khan	37	Shagram	199	150	52	34	124	132	75	570	1710	1740
	12	Md. Yusuf Khan	17	Yaghur	185	150	48	33	108	108	66	540	1730	1710
	13	Mir Salam Khan	50	Barog	174	157	51	33	116	114	66	540	1710	1740
	14	Ashraf	60	Kurkashan	184	149	52	34	115	125	68	530	1630	1690
	15	Md. Sharif Khan	17	Drosh	183	147	50	25	118	118	71	560	1680	1660
	16	Mir Afyum Khan	37	Uyhum	200	150	55	31	124	113	67	576	1670	1660
	17	Motahir Shah	18	Drosh	182	150	49	33	105	102	57	543	1570	1610
	18	Musanif Khan	22	,,	177	148	49	31	124	112	68	545	1640	1670
	19	Mirya	48	Kori	184	149	52	35	128	113	62	530	1760	1800
	20	Kamil	48	Ayum	190	153	50	36	129	109	63	545	1760	1810
	21	Khan	37	,,	186	151	48	33	126	109	64	560	1620	1590
	72	Qurban	48	Kushum	181	150	51	37	139	123	67	533	1670	1700
	73	Taighun	22	Rukut	187	145	50	30	121	123	69	547	1620	1620
Mastuji	44a	Shirman	44	Awi	198	159	44	39	125	111	63	590	1740	1810
	45a	Nur Akbar Shah	25	Mastuj	190	158	48	28	114	107	66	570	1630	1730
	46	Khuda Nazar Beg	38	Chuinj	187	152	42	33	118	106	62	580	1640	1680
	47	Sayad Yahya	22	Ghoru	181	156	44	34	113	109	60	568	1610	1610
	48	Sahib Imran	25	Parkusap	187	147	48	34	121	111	67	578	1680	1760
	49	Mulakat Shah	30	Kurgh	171	141	44	32	111	103	64	550	1530	1700
	50	Mairam Beg	22	Chinar	180	143	42	33	123	99	59	543	1590	1610
	51	Nurulla Khan	48	,,	173	144	46	34	106	114	64	543	1650	1620
	52	Fasil Khan	35	Parkusap	187	145	45	36	116	119	69	562	1710	1800
	53	Halawat Shah	30	Ghoru	188	137	42	33	115	99	54	550	1550	1560
	54	Munawar Khan	44	Parkusap	190	159	48	33	122	118	70	575	1640	1760
	55	Fasil Khan	35	Nissur	172	147	35	32	119	96	55	560	1650	1680
	56	Niyat Shah	44	Chinar	192	143	51	33	121	117	68	588	1690	1640
	57	Khuda Madad	50	Chuinj	196	149	43	29	118	109	68	562	1560	1710
	58	Jana	34	Chinar	188	149	53	29	119	109	67	572	1680	1720
	59	Shokar Murad	30	Chuinj	191	154	48	33	126	113	69	588	1740	1800
	60	Durdana Shah	50	Ghoru	187	140	45	38	112	109	61	528	1660	1620
	61	Shapir	25	Sonoghor	181	149	42	33	110	101	62	550	1700	1650
	62	Ghulam Jan	46	Mastuj	186	151	44	34	123	109	69	581	1620	1630
	63	Bindochi	22	Sonoghor	189	145	44	34	108	108	65	572	1610	1680
	64	Momin Hayat	55	Chinar	193	157	51	33	133	128	72	576	1770	1750
	65	Jan Shukri	24	Sonoghor	181	151	48	32	122	109	68	575	1840	1860
	66	Masnavi	45	Chinar	182	152	50	29	116	121	68	552	1690	1680
	67	Rushmat Kabul	33	Mastuj	185	143	54	30	120	112	68	576	1660	1700
	71	Turghel	56	Shukhar	185	151	50	37	133	128	72	542	1650	1600
	74	Gul	45	Shusht	181	153	58	39	129	123	71	563	1660	1690
	75	Chirmali	43	Yo Shusht	185	154	51	41	139	128	67	550	1690	1750
	76	Qurban Mohammed	39	Kagdeh	192	154	50	36	126	121	67	556	1810	1780

62. Suffered from small-pox.

TABLE I. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Sarikoli	88	Mulabai	32	Tash-kurghan	192	162	52	30	138	123	72	575	1750	1760
	89	Jesaul	36	,,	181	141	46	31	122	114	59	536	1620	1700
	90	Kulan	28	Tung	188	148	41	41	126	106	56	525	1610	1640
	91	Rajab	30	Baldir	181	143	48	34	128	112	72	526	1640	1660
	92	Aziz	32	Tung	186	142	46	30	125	116	70	536	1600	1630
	93	Dushembe	56	Wacha	183	150	53	38	127	111	59	533	1600	1600
	94	Md. Qurban	25	Armaligh	180	148	45	32	130	111	63	542	1700	1690
	95	Shaik Bai	46	Tash-kurghan	178	155	46	39	123	105	60	544	1620	1640
	96	Juma	20	Koghushlak	180	135	48	32	122	108	64	520	1630	1660
	97	Baba	68	Armaligh	182	150	46	38	125	106	61	530	1620	1630
	98	Akbar Aman	56	Tash-kurghan	173	152	46	35	121	103	56	516	1650	1660
	99	Niaz Akhun	25	Wacha	184	146	50	35	121	115	69	543	1600	1600
	100	Md. Alim	66	Koghushlak	176	148	46	29	123	121	72	525	1620	1660
	101	Niaz Md.	25	Wacha	183	136	50	28	116	105	67	540	1630	1640
	102	Qadir Kul	25	Tash-kurghan	186	152	56	37	125	112	71	555	1770	1830
	103	Kuz Md.	23	,,	178	147	45	36	121	116	61	535	1720	1750
	104	Rustam	43	Tiznaf	184	150	42	39	125	104	59	550	1630	1630
	105	Hashur Bai	27	,,	189	140	46	36	120	113	73	540	1680	1710
	106	Charik Bai	38	Armaligh	181	162	47	38	136	108	63	554	1720	1720
	107	Md. Ashur	23	Chushman	187	147	44	31	124	120	69	533	1600	1640
	108	Tabaldi	52	Tiznaf	180	149	49	35	130	114	66	540	1600	1640
	109	Samak	23	Armaligh	189	151	44	35	131	105	57	552	1680	1650
	110	Md. Tukhta	25	Baldir	177	153	50	32	121	119	72	534	1540	1550
	111	Md. Niaz	28	Tash-kurghan	182	155	48	34	130	121	74	550	1620	1640
	112	Md. Shafi	40	Kuzghan	191	154	53	37	135	121	65	560	1600	1630
	113	Pansad	28	,,	193	154	52	31	135	132	79	557	1760	1800
	114	Bai Hassan	35	Tiznaf	188	150	45	35	125	117	69	550	1600	1640
	115	Dalim Bai	43	,,	183	154	50	34	129	124	70	545	1660	1680
	116	Palik	34	Kuzghan	177	152	46	34	124	108	65	534	1650	1710
	117	Khwaja	31	Tash-kurghan	185	160	45	32	123	112	63	550	1550	1570
	118	Ramzan	55	Kuzghan	190	155	49	32	127	111	65	560	1530	1600
	119	Mufti	35	Baldir	186	140	51	33	121	115	69	540	1700	1730
	120	Kashik	60	Tash-kurghan	182	150	57	35	126	114	71	535	1760	1780
	121	Takik	35	Kuzghan	182	144	50	34	125	113	65	530	1700	1710
	122	Baba	50	Tar	180	154	46	35	126	116	68	540	1640	1660
	123	Tukhta	22	,,	173	157	45	34	125	116	70	525	1630	1660
	124	Md. Gharib	40	Tiznaf	189	174	51	38	129	108	66	550	1550	1640
	125	Kurban Qul	20	Kuzghan	186	150	40	30	121	111	62	545	1620	1660
	126	Tahir Qul	25	Wacha	184	150	46	32	123	99	64	536	1560	1560
	127	Sharif	17	,,	180	138	44	30	126	107	66	545	1550	1580
Bagh-jigda	128	Rahim Akhun	22	Bagh-jigda	182	146	46	28	124	120	62	540	1660	1740
	129	Hushim	39	,,	184	150	46	37	125	97	67	550	1630	1670
	130	Sayudun	17	Karghalik	178	139	45	31	120	104	68	530	1590	1660
	131	Hosho	38	Bagh-jigda	181	146	45	31	130	110	63	540	1700	1710
	132	Khuliawai	45	,,	188	153	49	36	126	117	69	540	1610	1640
	133	Musa Akhun	25	,,	194	140	42	35	124	114	64	533	1700	1800
	134	Metim	18	,,	174	145	43	37	116	108	65	510	1590	1580
	135	Roza Akhun	23	,,	188	141	47	37	118	110	70	524	1590	1600
	136	Tokhta	25	,,	189	148	40	34	123	108	59	540	1570	1670
	137	Md. Saut	39	,,	191	152	45	38	130	128	70	565	1730	1750
	138	Yusuf	38	,,	174	150	50	37	125	122	68	520	1580	1690
	139	Turda Akhun	28	,,	190	150	47	38	134	110	69	560	1820	1910
Pakhpu	140	Musa Akhun	43	Kukda	186	158	50	31	126	114	72	550	1560	1600
	141	Md. Hussain	42	Kishloghuz	184	153	44	32	128	104	62	535	1540	1600
	142	Mullah Akhun	32	Bek-yailak	187	152	40	37	124	112	60	550	1650	1650
	143	Kamal	38	Sarik-aghiz	181	144	47	37	123	118	63	527	1590	1660
	144	Md. Tokhta	39	Yinchighiz	184	149	47	40	126	111	66	540	1670	1660
	145	Ahmad	34	Otman-yagach	178	151	47	37	122	110	62	533	1610	1640
	146	Hafiz	40	Sarik-aghiz	188	146	45	36	123	110	61	548	1560	1570
	147	Supüghe	30	Sugetlik	189	147	49	38	130	115	69	538	1660	1640
	148	Turdakhun	25	Kawaklik	181	151	50	33	131	110	64	530	1570	1610
	149	Md. Sayit	25	Yagho	181	142	45	36	122	106	60	530	1520	1490
	150	Baba Uza	47	Pakhpu	181	147	51	38	122	112	69	530	1630	1650
	151	Küchak	30	,,	195	149	50	37	128	110	67	560	1670	1700
	152	Isa	36	,,	178	148	51	35	133	117	67	526	1610	1650
	153	Hassain	44	,,	193	148	50	33	122	122	66	555	1600	1620
	154	Kuwan	25	,,	184	146	45	34	121	110	65	526	1550	1610

89. Suffered from small-pox.
99. Ancestors came from Shighnan.
92. Suffered from small-pox.
108. Suffered from small-pox.
98. Lame in the left leg.
131. Suffered from small-pox.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
84	58	89	52	101	Rosy	Med.	Abs.	Dk. br.	Curly	Ab.	S.O.	Cx.	St.	Cultivator.
78	67	93	48	105	,,	Bl.	,,	Fair	,,	,,	,,	,,	,,	,,
79	100	84	44	102	,,	Med.	,,	Dk. br.	,,	,,	L.O.	,,	Conc.	,,
79	71	88	56	101	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
76	65	93	56	102	,,	Dk.br.	,,	Fair	,,	,,	S.O.	,,	,,	,,
82	72	87	46	100	,,	Med.	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
82	71	85	48	99	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
87	85	85	49	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
75	67	89	52	102	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
82	83	85	49	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
88	76	85	46	101	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
79	70	95	57	100	,,	,,	,,	Fair	,,	,,	L.O.	,,	,,	,,
84	63	98	59	102	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
74	56	91	58	101	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
82	66	90	57	103	,,	Bl.	,,	Fair	,,	,,	L.O.	,,	,,	,,
83	80	92	50	102	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	,,	,,
82	93	83	47	100	,,	,,	,,	Blk.	,,	,,	S.O.	,,	,,	,,
74	78	94	61	102	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
90	81	79	46	100	,,	,,	,,	Fair	,,	,,	,,	,,	,,	,,
79	70	97	56	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
83	71	88	51	102	,,	,,	,,	Blk.	,,	,,	L.O.	,,	,,	,,
80	80	80	43	98	,,	,,	,,	Dr. br.	,,	,,	S.O.	,,	,,	,,
86	64	98	59	101	,,	,,	,,	Fair	,,	,,	,,	,,	Aq.	,,
85	71	93	57	101	,,	Bl.	,,	Dk. br.	,,	,,	L.O.	,,	St.	,,
81	70	90	48	102	,,	Med.	,,	,,	,,	,,	S.O.	,,	,,	,,
80	60	98	59	102	,,	Bl.	,,	Fair	,,	,,	L.O.	,,	,,	,,
80	78	94	55	102	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	,,	,,
84	68	96	54	101	,,	Bl.	,,	,,	,,	,,	,,	,,	,,	,,
86	74	87	52	104	,,	,,	,,	Fair	,,	,,	S.O.	,,	,,	,,
86	71	91	51	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
82	65	87	51	104	,,	Med.	,,	,,	,,	,,	,,	,,	,,	,,
75	65	95	57	102	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
82	61	90	56	101	,,	Bl.	,,	,,	,,	,,	,,	,,	,,	,,
79	68	90	52	101	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
86	76	92	54	101	,,	Med.	,,	,,	,,	,,	W.	,,	,,	,,
91	76	93	56	102	,,	Bl.	,,	Fair	,,	,,	L.O.	,,	,,	,,
92	75	84	51	106	,,	Med.	,,	Dk. br.	,,	,,	S.O.	,,	,,	,,
81	75	92	51	102	,,	Bl.	,,	Fair	,,	,,	L.O.	,,	,,	,,
82	70	80	52	100	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	,,	,,
77	68	85	52	102	,,	,,	,,	Fair	,,	,,	,,	,,	,,	,,
80	61	97	50	105	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
82	80	78	54	102	,,	,,	,,	,,	,,	,,	W.	,,	Conc.	Tailor.
78	69	87	57	104	,,	,,	,,	,,	,,	,,	S.O.	,,	St.	Cultivator.
81	69	85	48	101	,,	,,	,,	,,	,,	Mod.	S.S.	,,	Conc.	,,
81	73	93	55	102	,,	,,	,,	,,	,,	Ab.	W.	,,	St.	,,
72	83	92	52	106	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
83	86	93	56	99	,,	,,	,,	Blk.	,,	,,	S.O.	,,	Conc.	,,
75	79	93	59	101	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	St.	,,
78	85	88	48	106	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
80	84	98	54	101	,,	,,	,,	Blk.	,,	,,	L.O.	,,	,,	,,
86	74	98	54	107	,,	Bl.	,,	Dk. br.	,,	,,	S.O.	,,	,,	,,
79	81	83	51	105	,,	Med.	,,	,,	,,	,,	L.O.	,,	,,	,,
85	62	91	57	103	,,	L.	,,	Fair	,,	,,	S.O.	,,	Aq.	Cultivator and shepherd.
83	73	81	48	104	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	St.	Headman.
81	92	90	48	100	,,	Med.	,,	,,	,,	,,	,,	,,	,,	Cultivator and herdsman.
80	79	96	51	104	,,	L.	,,	,,	,,	,,	,,	,,	,,	Herdsman.
81	85	88	52	99	,,	Med.	,,	,,	,,	,,	,,	,,	,,	,,
85	79	90	51	102	,,	,,	,,	Ch. br.	,,	,,	,,	,,	,,	,,
78	80	89	50	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
78	78	89	53	99	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
83	66	84	49	103	,,	L.	,,	Ch. br.	,,	,,	L.O.	,,	,,	,,
78	80	87	49	98	,,	,,	,,	Fair	,,	,,	S.O.	,,	,,	,,
81	75	92	57	101	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
76	74	86	52	102	,,	Med.	,,	Ch. br.	,,	,,	,,	,,	,,	,,
83	69	88	50	102	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
77	66	100	54	101	,,	Dk.	,,	,,	,,	,,	,,	,,	,,	,,
79	76	91	54	104	,,	Med.	,,	Ch. br.	,,	,,	,,	,,	,,	,,

133. Suffered from small-pox. 136. Suffered from small-pox. 140. Suffered from small-pox.
154. Suffered from small-pox.

TABLE 1. LIST OF

Group	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Pakhpu	155	Muhammad	30	Pakhpu	184	150	45	33	130	108	67	537	1640	1660
	156	Sultan	39	,,	188	150	54	35	129	123	67	533	1580	1600
	157	Ali	32	,,	200	150	47	41	133	123	74	567	1710	1730
	158	Aman Sofi	41	,,	177	147	44	37	127	114	64	521	1570	1620
	159	Risht	40	,,	185	143	49	33	125	123	70	531	1670	1700
	160	Qadir	20	,,	186	145	51	34	123	114	67	535	1620	1610
	161	Kepek	46	,,	196	145	56	38	120	123	73	548	1580	1630
	162	Abdul Rasul	38	,,	189	150	53	35	124	121	69	542	1520	1550
	163	Shāshim	56	,,	191	148	55	37	123	122	77	535	1590	1550
	164	Zaid	49	,,	196	155	52	35	126	113	69	552	1630	1650
Nissa	202	Alip-shah	30	Nissa	185	144	51	31	125	113	70	542	1540	1510
	203	Baida Akhun	25	,,	187	150	55	40	136	118	73	550	1610	1610
	204	Almusa Akhun	22	,,	192	144	45	36	127	115	67	545	1590	1590
	205	Mamat Akhun	35	,,	189	148	47	37	120	116	71	552	1560	1580
	206	Md. Nure	40	,,	184	149	50	36	134	110	64	542	1590	1590
	208	Hasan Md.	24	,,	193	151	54	41	135	114	70	558	1650	1590
	209	Khuda-berde	18	,,	189	148	44	36	129	103	61	550	1540	1530
	210	Supe	75	,,	200	155	46	38	140	115	62	580	1650	1670
	211	Akhun	70	,,	187	150	58	38	122	114	68	535	1690	1690
Kök-yar	165	Heisil Akhun	35	Kök-yar	175	158	46	37	123	115	66	524	1580	1640
	166	Said	48	,,	167	154	59	32	123	125	76	510	1650	1640
	167	Sitakhun	30	,,	176	153	50	38	130	122	73	531	1620	1670
	168	Supe	38	,,	180	150	51	38	133	122	71	528	1600	1650
	169	Azim Bai	53	,,	178	155	56	39	126	121	71	538	1580	1650
	170	Daud	24	,,	174	155	51	37	133	117	72	520	1640	1710
	171	Abdul Rasul	57	,,	175	145	49	34	125	108	64	518	1530	1620
	172	Aisa	30	,,	189	160	53	38	133	117	71	565	1610	1660
	173	Kūwan	38	,,	175	153	53	43	135	124	69	532	1600	1650
	174	Ahmad	26	,,	175	146	53	36	130	113	67	524	1740	1860
	175	Amin	40	,,	173	142	50	37	129	115	68	505	1640	1770
	176	Kurban	44	,,	180	151	53	34	128	130	78	543	1630	1730
	177	Osman	41	,,	194	159	50	38	132	117	68	565	1610	1630
	178	Khizakhun	20	,,	182	158	51	39	130	118	71	550	1660	1670
	179	Daulat	38	,,	172	151	47	33	129	115	70	525	1590	1600
	180	Osman	36	,,	170	155	53	40	130	120	71	525	1630	1730
	181	Almasu	30	,,	179	159	45	36	124	115	68	545	1600	1620
	182	Mohman	48	,,	179	149	47	36	118	110	69	526	1640	1670
	183	Mollim Bai	51	,,	178	150	49	37	128	113	63	522	1550	1530
	185	Hazrat	44	,,	193	165	52	41	138	123	69	580	1780	1850
	186	Said	39	,,	183	160	49	37	132	113	70	558	1610	1620
	187	Nauroz	50	,,	180	148	53	30	123	121	69	528	1780	1780
	188	Ahmad	24	,,	188	160	50	38	134	120	71	561	1680	1680
	189	Muhammad	26	,,	181	145	41	36	135	108	62	529	1670	1710
	190	Yusuf	36	,,	186	141	48	37	127	120	72	538	1580	1620
	191	Tudakhun	27	,,	185	157	51	35	125	116	71	550	1610	1540
	192	Kadir	30	,,	182	155	44	33	125	112	63	537	1580	1580
	193	Musa	36	,,	185	141	53	38	122	125	75	537	1690	1720
	194	Chuwar	27	,,	183	155	47	35	[illegible]	110	70	541	1580	1620
	195	Tokhtakhun	20	,,	177	155	55	36	130	121	75	540	1640	1630
	196	Kadir	20	,,	176	152	49	40	133	115	70	533	1700	1710
	197	Yirek	40	,,	177	147	48	38	120	116	67	520	1550	1520
	198	Kuwan	54	,,	172	148	52	40	132	116	68	515	1550	1520
	199	Yusuf	30	,,	178	160	56	40	139	121	73	540	1700	1750
	200	Tukhta	38	,,	178	153	51	37	135	113	65	535	1570	1590
	201	Bai Ghuja	43	,,	179	159	54	34	135	126	74	545	1650	1690
	184	Aziz	50	,,	186	165	53	33	130	132	75	563	1660	1700
Karanghu-tagh	207	Iman Akhun	30	Karanghu-tagh	200	148	52	37	135	123	75	569	1720	1690
	212	Abdul Karim	50	,,	183	146	53	37	132	113	68	530	1660	1670
	213	Azim Bai	40	,,	198	146	50	37	128	115	67	555	1670	1580
	214	Sayit	50	,,	189	150	53	36	132	108	63	545	1660	1650
	215	Yusuf	60	,,	190	152	55	36	127	121	69	554	1640	1640
	216	Md. Yusuf	50	,,	188	152	55	33	133	125	75	546	1590	1560
	217	Abdul Ghafur	54	,,	181	160	52	37	132	119	65	558	1630	1600
	218	Turdi Bai	51	,,	188	147	56	36	130	107	67	545	1650	1650
	219a	Islam Niaz	45	,,	185	153	50	38	130	113	70	541	1660	1670
	219	Azim	36	,,	194	150	45	41	131	118	71	554	1620	1610
	220	Paiza	38	,,	188	149	45	38	133	116	69	550	1680	1700

157. Moderate beard.
160. Scanty beard.
170. Head shaved.
171. Looks like a Taghlik.
174. Head shaved.
175. Hair of head affected by skin disease.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
82	73	83	52	101	Rosy	Med.	Abs.	Ch. br.	Curly	Ab.	L.O.	Cx.	St.	Herdsman.
80	65	95	52	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
79	87	92	56	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
83	84	90	50	103	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
77	67	98	56	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
78	67	93	54	99	,,	,,	,,	,,	,,	Mod.	,,	,,	,,	,,
74	68	102	61	103	,,	,,	,,	Ch. br.	,,	Ab.	,,	,,	,,	,,
79	66	98	56	102	,,	L.	,,	Dk. br.	,,	,,	,,	,,	,,	,,
77	67	99	63	97	,,	,,	,,	Grey	,,	,,	,,	,,	Aq.	,,
79	67	90	55	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	St.	,,
78	61	90	56	98	,,	Dk.	,,	Blk.	,,	,,	,,	,,	,,	Cultivator.
80	73	87	54	100	,,	,,	,,	Dk. br.	,,	,,	S.O.	,,	,,	Goatherd.
75	80	91	53	100	,,	Med.	,,	Fair	,,	,,	,,	,,	,,	Cultivator.
78	79	97	59	101	,,	Dk.	,,	Blk.	,,	,,	,,	,,	,,	Goatherd.
81	72	82	48	100	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	Cultivator.
78	76	84	52	96	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	Goatherd.
78	82	80	47	99	,,	,,	,,	Blk.	,,	,,	S.O.	,,	,,	,,
78	83	81	44	101	,,	Bl.	,,	Fair	,,	,,	Ob.	,,	Conc.	,,
80	66	93	56	100	,,	Dk.	,,	Blk.	,,	,,	L.O.	,,	St.	Labourer.
90	80	93	54	104	R. br.	,,	,,	,,	,,	,,	W.	,,	,,	Cultivator.
92	54	102	62	99										
87	76	94	56	103	Rosy	Med.	Abs.	Blk.	Curly	Mod.	L.O.	Cx.	St.	Cultivator.
83	75	92	53	103	,,	,,	,,	Dk. br.	,,	Ab.	W.	,,	,,	,,
87	70	96	56	104	,,	,,	,,	,,	,,	,,	S.S.	,,	,,	,,
89	73	88	54	104	,,	,,	,,	Blk.	,,	Sc.	S.O.	,,	,,	,,
83	69	86	51	106	,,	Bl.	,,	Ch. br.	,,	Ab.	,,	,,	,,	,,
85	72	88	53	103	,,	Med.	,,	,,	,,	Sc.	L.O.	,,	,,	,,
87	81	92	51	103	,,	L.	,,	,,	,,	Ab.	W.	,,	,,	,,
83	68	87	52	107	,,	Dk.	,,	Blk.	St.	Sc.	S.O.	,,	Sin.	,,
82	74	89	53	108	,,	,,	,,	,,	Curly	,,	,,	,,	St.	,,
84	64	102	61	106	,,	Med.	,,	,,	,,	Ab.	Sq.	,,	Sin.	Trader.
82	76	89	52	101	,,	,,	,,	Ch. br.	,,	,,	S.O.	,,	St.	Cultivator.
87	76	91	55	101										
88	70	89	54	101	Rosy	Med.	Abs.	Dk. br.	Curly	Ab.	W.	Cx.	St.	Cultivator.
91	75	92	55	106	,,	Dk.	,,	,,	,,	Mod.	,,	,,	,,	,,
89	80	93	55	101	,,	Med.	,,	,,	,,	Sc.	,,	,,	,,	,,
83	77	93	58	102	,,	,,	,,	Grey	,,	Ab.	,,	,,	,,	,,
84	76	88	49	99	,,	Dk.	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
85	79	89	50	104	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
87	76	86	53	101	,,	Med.	,,	Ch. br.	,,	,,	S.O.	,,	,,	,,
82	57	98	56	100	Yell. wh.	,,	,,	Blk.	,,	,,	L.O.	,,	,,	,,
85	76	90	53	100	Rosy	,,	,,	Dk. br.	,,	Sc.	S.O.	,,	,,	,,
80	88	80	46	102	,,	Dk.	,,	Blk.	,,	,,	W.	,,	,,	,,
76	77	94	57	103	,,	Med.	,,	Dk. br.	,,	Ab.	S.O.	,,	,,	,,
85	69	93	57	102	,,	Dk.	,,	,,	,,	,,	W.	,,	,,	,,
85	75	90	50	100	,,	Med.	,,	Ch. br.	,,	,,	S.O.	,,	,,	,,
76	72	102	61	102	,,	Dk.	,,	Blk.	,,	,,	L.O.	,,	,,	,,
85	74	83	53	103	,,	Med.	,,	Ch. br.	,,	Sc.	Sq.	,,	,,	,,
88	65	93	58	99	,,	,,	,,	Blk.	,,	,,	W.	,,	,,	,,
86	82	86	53	101	,,	Dk.	,,	,,	,,	,,	R.	,,	,,	,,
83	79	97	56	98	,,	Med.	,,	Ch. br.	,,	Ab.	L.O.	,,	,,	,,
86	77	88	51	98	,,	Dk.	,,	Dk. br.	,,	,,	W.	,,	,,	,,
90	71	87	52	103	,,	Med.	,,	Ch. br.	,,	Sc.	S.O.	,,	,,	,,
86	73	84	48	101	,,	,,	,,	Dk. br.	,,	Ab.	W.	,,	,,	,,
89	63	93	55	102	,,	Dk.	,,	,,	,,	,,	L.O.	,,	,,	,,
89	62	101	58	102	,,	Med.	,,	Grey	,,	,,	,,	,,	Sin.	,,
74	71	91	56	98	,,	Dk.	,,	Fair	,,	,,	W.	,,	St.	Yūz-bashi.
80	70	86	51	101							L.O.		,,	
74	74	90	52	95							,,		,,	
79	68	82	48	99							,,		,,	
80	65	95	54	100							,,		,,	
81	60	94	56	98							S.O.		Aq.	
88	71	90	49	98							L.O.		St.	
78	64	82	51	100							,,		,,	
83	76	87	54	101							,,		Aq.	
77	91	90	54	99	Rosy	Med.	Abs.	Fair	Curly	Ab.	S.O.	Cx.	St.	Goatherd.
79	84	87	52	101	,,	,,	,,	L. br.	,,	,,	,,	,,	,,	Goatherd and cultivator.

185. Projecting cheek-bones.
192. Very fair complexion.
193. Head compressed at temples.
194. Small, receding chin.
196. No moustache or beard, and head shaved.
197. Head compressed at temples.
199. Very fair.

TABLE 1. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Karanghu-tagh	221	Aisa	43	Karanghu-tagh	202	152	56	34	128	28	71	572	1710	1800
	222	Sipsük	63	,,	198	149	53	35	135	22	70	564	1730	1750
	223	Talip Akhun	49	,,	204	148	57	37	132	135	80	580	1680	1710
	224	Hayat Akhun	28	,,	198	152	50	36	138	114	68	571	1700	1700
	225	Imid	42	,,	181	140	55	30	125	121	76	520	1590	1580
	226	Tumur Akhun	26	,,	200	147	53	36	132	118	62	562	1800	1830
	227	Fasu Niaz	23	,,	197	144	48	42	132	113	62	540	1670	1680
	228	Shamshudulah	48	,,	185	144	44	45	132	106	63	538	1650	1630
	229	Bāke	42	,,	190	151	56	35	132	115	70	556	1580	1620
	230	Ayim Shah	18	,,	186	150	42	33	124	112	62	542	1580	1560
Korla	404a	Khuda-berdi	38	Korla	190	160	48	39	137	123	71	560	1670	1720
	405a	Sawud	26	,,	190	153	50	40	136	116	64	561	1670	1720
	406a	Yakub	38	,,	175	156	38	39	126	105	56	540	1730	1710
	407a	Turdi	39	,,	184	157	48	35	133	124	69	553	1730	1780
	408a	Tokhta	25	,,	183	161	46	36	121	113	65	555	1740	1750
	409a	Ela	30	,,	183	162	52	42	129	123	67	556	1770	1700
	410a	Ismail	30	,,	188	159	53	40	140	132	76	565	1750	1800
	413a	Sarib	30	,,	175	156	49	37	131	111	70	540	1630	1630
	416a	Ahmad	23	,,	177	164	43	36	139	111	61	547	1580	1530
	417a	Roza Akhun	32	,,	186	152	49	35	131	114	73	555	1700	1690
	418a	Asim	18	,,	188	156	47	35	127	114	65	530	1650	1620
	419a	Roza Akhun	40	,,	186	155	54	35	133	133	75	555	1550	1500
	420a	Abaile	22	,,	189	161	43	40	136	113	65	565	1550	1520
	403a	Hakim	35	,,	184	163	48	36	126	118	70	552	1630	1650
Wakhi	68	Shabdul Qadir	30	Kala Paiyan	193	159	52	35	123	113	72	564	1660	1700
	69	Jalib Shah	45	,,	178	165	56	38	129	114	71	563	1700	1720
	70	Rajab Md.	42	Nirs	186	159	51	40	134	114	75	550	1730	1800
	77	Talmish Khan	30	Chihilkand	176	149	51	35	128	123	72	545	1820	1750
	78	Moghot Beg	36	Tang	187	159	51	36	123	105	62	550	1700	1720
	79	Ayim Khan	37	Usht	180	156	48	34	118	109	63	530	1630	1640
	80	Hamani	36	Hiur	181	157	51	36	134	117	71	540	1720	1750
	81	Maksud	55	Sarhad	176	157	47	36	127	121	69	522	1670	1650
	82	Khan	33	Kirat	180	148	49	33	128	117	70	525	1660	1710
	83	Halawat	28	Rahchao	175	154	54	34	126	120	73	524	1700	1710
	84	Safar Ali	34	Kizgat	187	165	51	40	144	113	65	565	1820	1820
	85	Bai Md.	44	Patkhu	187	159	47	38	140	108	63	565	1700	1720
	86	Halif	40	Osht	181	151	50	33	124	118	69	540	1660	1730
	87	Amir Shah	35	Chilkand	180	151	54	33	130	119	72	533	1630	1620
	40	Hasanek	60	Lutcho	181	164	47	31	128	105	62	560	1580	1650
	41	Yaqin Shah	62	,,	190	151	49	45	122	118	78	570	1670	1690
	42	Charshambe	32	,,	189	154	48	32	125	112	62	565	1610	1640
	43	Khairullah	35	,,	199	154	55	36	122	122	73	574	1620	1650
	44	Azam	54	,,	185	146	47	36	127	117	61	555	1630	1660
Turfan	323	Baka Niaz	52	Turfan	182	161	44	44	127	106	56	553	1540	1620
	324	Yambar	51	,,	179	168	52	40	125	124	67	536	1560	1600
	325		30	,,	189	154	47	35	142	114	65	550	1650	1640
	326		35	,,	188	153	47	38	126	119	69	553	1690	1700
	327	Mehmed	30	,,	180	146	43	38	138	118	60	527	1710	1650
	329	Tayir	37	,,	180	153	44	35	130	111	60	540	1620	1600
	330		25	,,	193	150	41	39	130	110	61	558	1610	1620
	331		21	,,	198	165	50	38	142	123	68	572	1820	1800
	332		55	,,	189	160	53	37	130	126	67	565	1820	1600
	333		30	,,	181	165	54	36	137	121	73	553	1620	1600
	334	Hayat Akhun	20	,,	188	155	42	34	134	110	65	555	1750	1720
	335	Roze	18	,,	175	146	46	33	126	111	66	514	1650	1670
	336	Abdullah	19	,,	194	155	45	34	131	122	71	570	1730	1750
	337	Namat	25	,,	185	160	48	35	136	120	63	553	1800	1870
	338	Tokhtakhun	20	,,	185	150	48	39	132	121	70	544	1730	1800
	339	,,	23	,,	189	150	48	33	129	118	68	550	1640	1720
	340	Tokhte	28	,,	178	153	46	35	129	114	62	535	1540	1510
	341	Roze Akhun	31	,,	190	165	48	40	138	110	62	563	1660	1700
	342	Md. Tadul	25	,,	194	153	49	39	138	121	68	564	1690	1750
	345	Ahmed	40	,,	185	163	51	40	135	122	68	560	1740	1700
	346	Koshur	30	,,	185	159	48	40	132	120	65	548	1730	1740
	347	Sayad Niaz	24	,,	184	158	45	38	130	120	66	560	1640	1630
	348	Tachuwak	45	,,	180	158	48	33	129	112	65	543	1720	1710
	349	Tokhta Niaz	25	,,	176	157	46	40	134	111	70	545	1620	1600

410a. Beard fair.
323. Emigrated to Hami; would not open eyes fully.
40. Father from Badakhshan.
324. Emigrated to Hami; would not open eyes fully.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
75	61	100	55	105	Rosy	Bl.	Abs.	L. br.	Curly	Ab.	W.	Cx.	St.	Shepherd.
75	66	90	52	101	,,	Med.	,,	,,	,,	,,	L.O.	,,	,,	Cultivator.
73	65	102	61	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	Goatherd.
77	72	83	49	100	,,	,,	,,	Fair	,,	,,	,,	,,	,,	,,
77	55	97	61	99	,,	,,	,,	L. br.	,,	,,	W.	,,	,,	Goatherd and cultivator.
74	68	89	47	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	,, ,,
73	87	86	47	101	,,	,,	,,	Ch. br.	,,	,,	L.O.	,,	,,	Goatherd.
78	102	80	48	99	Dk. red br.	Blk.	,,	,,	,,		S.O.	,,	,,	Cultivator.
79	62	87	53	103	Rosy	Med.	,,	L. br.	,,	Ab.	W.	,,	,,	,,
81	79	90	50	99	,,	Bl.	,,	Fair	,,	,,	S.O.	,,	,,	,,
84	63	90	52	103	,,	Med.	,,	Ch. br.	,,	,,	,,	,,	,,	,,
81	90	85	47	103	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
89	103	83	44	99	Yell. rosy	Dk.	Pres.	,,	,,	,,	Ob.	,,	St. ft.	,,
85	73	93	52	103	Rosy br.	,,	Abs.	Blk.	,,	Sc.	L.O.	,,	Conc.	,,
88	78	89	15	101	Yell. rosy	,,	,,	Dk. br.	,,	Ab.	,,	,,	Sin.	,,
89	81	95	52	96	Rosy br.	,,	,,	,,	,,	,,	,,	,,	St.	,,
84	76	94	54	103	Rosy	,,	,,	,,	,,	,,	,,	,,	,,	,,
89	76	85	53	100	,,	Med.	,,	,,	,,	,,	S.O.	,,	,,	,,
93	84	80	44	97	Yell.	Dk.	,,	Blk.	,,	Sc.	W.	,,	,,	,,
82	71	87	56	99										
83	74	90	51	98	Rosy	Med.	Abs.	Blk.	Curly	Ab.	S.O.	Cx.	St.	Blacksmith.
83	65	100	56	97	Rosy br.	Dk.	Pres.	,,	,,	,,	L.O.	,,	Sin.	Cultivator.
85	93	83	48	98	Rosy	Med.	Abs.	,,	,,	Sc.	S.O.	,,	Conc.	,,
89	75	94	56	101	,,	Dk.	,,	,,	,,	Ab.	,,	,,	St.	,,
82	67	92	59	102	,,	Med.	,,	Dk. br.	,,	,,	L.O.	,,	,,	Cultivator and shepherd.
93	68	88	55	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	Cultivator.
85	78	85	56	104	,,	,,	,,	,,	,,	,,	,,	,,	,,	
85	69	96	56	96	Dk. yell. br.	,,	,,	Blk.	,,	,,	,,	,,	,,	Cultivator.
85	71	85	50	101	Rosy	Dk.	,,	Fair	,,	,,	S.O.	,,	,,	,,
87	71	92	53	101	,,	Med.	,,	,,	,,	,,	,,	,,	,,	,,
87	71	87	53	102	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
89	77	95	54	99	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
82	67	91	55	103	,,	,,	,,	Fair	,,	,,	S.O.	,,	,,	,,
88	63	95	58	101	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
88	78	78	45	100	,,	Bl.	,,	,,	,,	,,	S.O.	,,	Sin.	,,
85	81	77	45	101	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	Conc.	,,
83	66	95	56	104	,,	,,	,,	Fair	,,	,,	L.O.	,,	St.	,,
84	61	92	55	99	,,	,,	,,	Dk. br.	,,	,,	S.O.	,,	Conc.	,,
91	66	82	48	104	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
79	92	97	64	101	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
81	67	90	50	102	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
77	65	100	60	102	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
79	77	92	48	102	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
88	100	83	44	105	Rosy br.	Dk.	?	,,	,,	,,	W.	,,	,,	,,
94	77	99	54	103	,,	Med.	Pres.	,,	,,	,,	L.O.	,,	,,	,,
81	74	80	46	99										
81	81	94	55	101										
81	88	86	43	96	Rosy yell.	Dk.	Sl. f.	Blk.	Curly	Sc.	S.O.	Cx.	St.	Cultivator.
85	80	85	46	99	Rosy	Med.	Abs.	Fair	,,	Ab.	L.O.	,,	,,	,,
78	95	85	47	101										
83	76	87	48	99										
85	70	97	52	99										
91	67	88	53	99										
82	81	82	48	98	Rosy	Med.	Abs.	Blk.	Curly	Sc.	S.O.	Cx.	St.	Cultivator.
83	72	88	52	101	,,	Dk.	,,	Dk. br.	,,	,,	,,	,,	,,	,,
80	76	93	54	101	,,	,,	,,	,,	?	,,	L.O.	,,	,,	,,
86	73	88	46	104	,,	,,	,,	,,	?	,,	,,	,,	,,	Blacksmith.
81	81	92	53	104	,,	,,	,,	,,	?	,,	,,	,,	,,	Cultivator.
79	69	91	53	105	,,	,,	,,	,,	Curly	Ab.	,,	,,	,,	,,
86	76	88	48	98	Rosy yell.	,,	,,	,,	?	Sc.	Sq.	,,	,,	,,
87	83	80	45	102	Rosy	,,	,,	,,	?	,,	L.O.	,,	,,	,,
79	80	88	49	104	Yell. rosy	,,	,,	Blk.	Curly	Mod.	,,	,,	,,	,,
88	78	90	50	98	Yellow	,,	?	Dk. br.	,,	Sc.	W.	,,	Sin.	Weaver.
86	83	91	49	101	Rosy	,,	Abs.	,,	,,	Ab.	L.O.	,,	St.	Cultivator.
86	84	92	51	99	,,	Med.	,,	Blk.	,,	Sc.	L.O.	,,	,,	,,
88	69	87	50	99	Yell. rosy	Dk.	,,	,,	,,	Ab.	,,	,,	,,	,,
89	87	83	52	99	Rosy	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,

329. Head shaved.
338. Head shaved.
336. Head shaved.
340. Head shaved.
337. Head shaved.
341. Head shaved.

TABLE 1. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Turfan	350	Niaz Akhun	26	Turfan	180	158	42	33	126	111	65	545	1670	1650
	351	Musa	35	,,	173	160	49	37	130	115	61	540	1700	1720
	353	Sawut	40	,,	183	163	49	35	127	111	68	557	1640	1640
	354	Metake	20	,,	185	152	45	36	137	112	67	551	1630	1650
	355	Khilakhun	25	,,	181	158	41	35	132	113	64	550	1580	1580
	360	Kayid	20	,,	190	159	49	35	132	116	68	560	1650	1700
	361	Tokhta Niaz	24	,,	184	150	47	39	131	122	72	541	1710	1650
	362	Barat	30	,,	183	155	51	34	127	121	73	544	1690	1730
	363	Muhd. Akhun	25	,,	185	156	49	34	134	120	67	553	1670	1660
	364	Mukayid	20	,,	187	157	49	38	142	114	67	560	1690	1730
	365	Tokhtang	37	,,	185	148	54	35	139	116	72	544	1720	1720
	366	Osman	30	,,	190	159	49	35	135	121	71	565	1720	1720
	367	Sadir	18	,,	182	152	46	39	130	112	65	540	1700	1690
	368	Kurban	25	,,	180	156	53	36	133	126	74	543	1620	1640
	369	Isup..	19	,,	183	159	47	38	133	123	71	560	1640	1670
	370	Choruk	23	,,	182	145	46	37	128	123	67	526	1690	1700
	371	Kabul	18	,,	184	151	44	35	124	106	63	541	1690	1720
	372	Adil	35	,,	188	154	49	36	136	116	64	548	1660	1690
	373	Mahid	37	,,	185	153	48.	34	129	120	70	545	1710	1750
	374	Tokhta Niaz	46	,,	180	161	54	37	127	120	70	560	1770	1720
	375	Niaz..	38	,,	187	152	53	37	118	117	69	553	1660	1710
	376	Muhammad	19	,,	180	155	47	42	132	111	65	537	1700	1780
	377	Yakub	35	,,	180	162	50	34	131	128	76	548	1600	1630
	378	Muhammad	20	,,	178	158	47	38	130	113	68	550	1660	1700
	379	Khalil	23	,,	179	166	48	35	141	123	71	561	1720	1700
	380	Muhammad	26	,,	186	155	46	40	135	128	71	550	1740	1730
	381	Kurban Niaz	22	,,	179	156	43	34	128	113	63	542	1640	1680
	382	Hoshur	20	,,	188	155	43	39	132	124	69	555	1690	1700
	383	Arib	37	,,	190	157	51	42	140	127	70	562	1640	1660
	384	Hamdul	22	,,	187	155	46	40	137	122	69	550	1660	1720
	385	Talib	28	,,	187	151	43	39	125	126	71	535	1660	1680
	386	Haja	40	,,	180	170	50	42	137	120	66	555	1630	1600
	387	Muhd. Zait	50	,,	180	160	54	37	130	124	73	540	1660	1710
	388	Niaz Akhun	36	,,	185	157	44	35	131	121	66	557	1630	1600
	389	Ghazil	38	,,	187	162	51	40	130	124	73	555	1600	1630
	390	Habil	30	,,	184	152	45	38	128	124	68	540	1640	1610
	391	Abdul Majid	20	,,	175	153	45	36	128	115	66	533	1600	1590
	392	Matiaz	55	,,	188	148	51	38	126	123	70	550	1780	1780
	393	Hashim	26	,,	188	160	47	39	130	122	70	568	1680	1700
	394	Nait..	20	,,	176	145	48	35	124	111	64	520	1560	1550
	395	Mutub	20	,,	176	146	47	32	124	117	66	529	1720	1820
	396	Super	21	,,	174	165	43	36	135	114	64	545	1620	1650
	397	Tokhta Niaz	23	,,	177	160	49	35	135	125	71	540	1620	1650
	398	Karim Niaz	28	,,	179	161	47	35	137	115	70	550	1610	1630
	399	Muhammad	20	,,	176	153	48	35	135	112	66	536	1580	1590
	400	Yusuf	22	,,	185	153	43	40	135	109	60	554	1620	1690
	401a	Hussain	25	,,	188	158	49	49	137	121	72	565	1680	1760
	402a	Pazil	38	,,	187	155	49	36	133	120	68	554.	1580	1650
Khotan	231	Ahmad Akhun	40	Lop	192	155	53	41	134	129	75	564	1740	1730
	232	Niaz..	24	,,	184	150	45	40	128	125	72	552	1670	1660
	233	Latif	50	,,	187	155	50	40	132	117	67	557	1670	1710
	234	Khuda-berdi	24	,,	185	153	47	42	134	108	65	547	1610	1750
	235	Roze	32	,,	195	151	44	39	124	113	65	560	1640	1650
	236	Muhd. Sharif	25	,,	173	161	44	40	133	115	63	533	1640	1650
	237	Tokhta	42	,,	187	152	53	38	130	117	72	560	1740	1750
	238		36	,,	187	158	48	33	125	122	72	555	1680	1690
	239	Muhammad	42	,,	185	146	50	38	130	118	69	535	1710	1770
	240		29	,,	190	158	47	37	130	115	69	557	1650	1720
	241	Khudakhun	38	,,	172	166	48	36	155	115	69	537	1730	1680
	321	Tursun	32	Khotan	176	157	49	38	135	124	51	533	1680	1700
	412a	Tursun	44	,,	188	158	43	37	141	120	66	560	1720	1730
	414a	Bake	37	,,	187	155	46	36	126	116	67	548	1700	1680
	506	Khuda-berdi	42	Allama	183	159	51	40	135	112	67	595	1730	1830
	507	Kabul	35	Yotkan	185	159	51	35	137	113	70	550	1650	1640
	508	Niaz..	32	,,	187	154	51	28	141	122	69	550	1755	1750
	509	Habibullah	45	,,	189	157	55	39	155	127	72	560	1730	1810
	510	Abdullah	50	,,	189	156	55	39	137	113	64	555	1630	1690

382. Bulging lips.
386. Beard and moustache fair.
391. Thick underlip. European features.
392. Head curiously pointed.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
88	79	88	52	99	Rosy	Dk.	Abs.	Blk.	Curly	Sc.	L.O.	Cx.	St.	Cultivator.
92	76	88	47	101	Yell. rosy	"	"	Dk. br.	"	Ab.	"	"	"	"
89	71	87	54	100	Rosy	"	"	"	"	Mod.	S.O.	"	"	"
82	80	82	49	101	Yell. rosy	"	"	Blk.	"	Sc.	W.	"	"	"
87	85	86	48	100	Rosy	"	"	"	"	"	S.O.	"	"	"
84	71	88	52	103	"	L.	"	Dk. br.	"	"	L.O.	"	"	Smith.
82	83	93	55	96	"	Med.	"	Blk.	"	"	"	"	"	Cultivator.
85	67	95	60	102	"	Dk.	"	Ch. br.	"	Ab.	"	"	"	"
84	69	90	50	99	"	"	"	Dk. br.	"	"	"	"	"	"
84	78	80	47	102	Rosy br.	Blk.	"	Blk.	"	Sc.	S.O.	"	"	"
80	65	83	52	100	"	Dk.	"	Dk. br.	"	Ab.	W.	"	"	"
84	71	90	53	100	Rosy	"	Pres.	"	"	Sc.	S.O.	"	"	"
84	85	86	50	99										
87	68	95	56	101	Rosy	Med.	Abs.	Dk. br.	Curly	Sc.	S.O.	Cx.	St.	Cultivator.
87	81	92	53	102	Rosy br.	"	"	Blk.	"		"	"	"	"
80	80	96	52	101										
82	80	85	51	102	Rosy	Dk.	Abs.	Dk. br.	Curly		S.O.	Cx.	St.	Cultivator.
82	73	85	47	102	"	"	"	"	"	Ab.	L.O.	"	"	"
83	71	93	54	102	"	Bl.	"	Fair	"	"	"	"	"	"
89	68	94	55	103	"	Med.	"	Dk. br.	"	"	"	"	"	"
81	70	99	58	103	Yell. rosy	"	"	Blk.	"	"	"	"	"	"
86	89	84	49	105	Rosy	Dk.	Pres.	Dk. br.	"	Sc.	S.O.	"	"	"
90	68	98	58	102	Rosy br.	"	Abs.	"	"	Ab	L.O.	"	"	"
89	81	87	52	102	Rosy	"	"	"	"	Sc.	S.O.	"	"	"
93	73	87	50	99	Rosy br.	"	"	Blk.	"	"	"	"	"	"
83	87	95	53	99	"	"	"	"	"	"	L.O.	"	"	"
87	79	88	50	102	Rosy	"	Pres.	"	"	"	W.	"	"	"
82	91	94	52	101	"	Med.	Abs.	Dk. br.	"	"	L.O.	"	"	"
83	82	91	50	101	"	Dk.	"	"	"	Ab.	S.O.	"	"	"
83	87	89	50	104	"	"	Pres.	"	"	Sc.	L.O.	"	"	"
81	91	101	57	101	"	"	Abs.	L. br.	"	Ab.	"	"	"	"
94	84	88	48	98	"	Bl.	"	Dk. br.	"	Mod.	W.	"	"	"
89	68	95	56	103	"	Dk.	Pres.	"	"	Ab.	L.O.	"	"	"
85	80	92	50	98	"	Med.	Abs.	"	"	"	"	"	Aq.	"
87	78	95	56	102	"	"	"	"	"	"	"	"	"	"
82	84	97	53	98	"	Dk.	"	"	"	Sc.	W.	"	"	"
87	80	90	52	99	"	Med.	"	"	"		L.O.	"	St.	"
79	74	98	56	100	"	"	"	Ch. br.	"	Ab.	"	"	Aq.	"
85	83	94	54	101	"	"	"	Dk. br.	"	"	"	"	"	"
82	73	90	52	99	"	Dk.	"	"	"	Sc.	S.O.	"	"	"
83	68	94	53	106	"	"	"	"	"	"	L.O.	"	"	"
95	84	84	47	102	"	"	"	"	"	"	R.	"	"	"
90	71	93	53	102	"	"	Pres.	"	"	"	W.	"	St.	"
90	74	84	51	101	Rosy br.	"	"	"	"	Ab.	S.O.	"	"	"
87	73	83	49	101	Rosy	"	Abs.	"	"	Sc.	W.	"	"	"
83	91	81	44	104	"	"	Pres.	"	"	"	S.O.	"	Aq.	"
84	100	88	53	105	"	Med.	"	Blk.	"	"	W.	"	St.	"
83	73	90	51	104	"	"	"	Dk. br.	"	Ab.	"	"	"	"
81	77	96	56	99	Fair	"	Abs.	"	"	"	L.O.	"	"	Leatherworker.
82	89	98	56	99	"	Dk.	Pres.	"	"	"	"	"	"	Darogha.
83	80	89	51	102										
83	89	81	48	109	Rosy	Med.		Ch. br.	Curly	Ab.	L.O.	Cx.	St.	Cultivator.
77	89	91	52	101										
93	91	86	47	101	Rosy	Dk.		Ch. br.	Curly	Ab.	L.O.	Cx.	St.	Darogha.
81	72	90	55	101	"	Med.		"	"	"	"	"	Sin.	Cultivator.
84	69	98	58	101										
79	76	91	53	104										
83	79	88	53	104										
97	75	74	44	97										
89	78	92	51	101	Rosy	Med.	Abs.	Dk. br.	Curly	Ab.	L.O.	Cx.	St.	Cultivator.
84	86	85	47	101	"	Dk.	"	"	"	"	"	"	"	"
83	78	92	53	99	"	"	"	Ch. br.	"	"	"	"	"	"
87	78	83	50	106	"	"	"	Dk. br.	"	"	"	"	"	Yuzbashi.
87	69	82	51	99	"	"	"	Blk.	"	"	"	"	"	Cultivator.
82	55	87	49	100	"	Fair	"	Dk. br.	"	"	"	"	Sin.	"
83	71	82	46	105	"	Dk.	"	"	"	"	W.	"	"	"
83	71	82	47	104	"	Med.	"	"	"	"	S.O.	"	"	"

321. Emigrated to Hami. 508. Has goitre. 509. Prominent cheek-bones
510. Prominent cheek-bones.

TABLE 1. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Khotan	511	Kurban	55	Yotkan	190	152	54	40	141	118	60	560	1690	*
	512	Kasim	50	,,	183	148	48	39	131	115	68	535	1620	1660
	513	Mamatiz	35	,,	175	153	50	37	140	118	69	535	1590	1590
	514	Roze	24	,,	175	156	45	37	133	93	55	528	1630	1580
	515	Sope	51	,,	182	145	50	41	135	112	66	540	1630	1660
	516	Kasim	32	,,	182	156	42	30	138	105	64	550	1610	1630
	517	Sadik	40	,,	182	157	57	35	136	137	75	550	1660	1710
	518	Sadik	22	,,	174	145	52	36	139	120	70	535	1620	1630
	519	Aziz	36	,,	187	161	52	34	144	124	71	550	1740	1790
	520	Ziyauddin	45	,,	184	155	51	36	145	107	67	540	1610	1610
	521	Tokhtak	65	,,	184	140	50	41	130	113	58?	525	1640	1605
	522	Aziz	72	,,	185	148	51	39	132	118	51*	540	1540	1530
	523	Turdi	55	,,	192	146	49	41	136	110	57	555	1620	1580
	524	Turfan	25	,,	191	160	50	37	132	117	68	555	1685	1710
	525	Tokhta	54	,,	176	156	53	40	143	118	66	540	1640	1680
	526	Khoja Ahmad	20	,,	165	159	46	35	136	116	68	528	1730	1700
	527	Aisa	55	,,	185	148	55	36	136	117	69?	530	1600	1560
	528	Aisa	45	,,	173	160	51	36	132	120	65	540	1650	1650
	529	Hassan	55	,,	178	156	49	40	139	114	66?	535	1640	1700
	530	Mahmud	45	,,	184	151	52	40	142	112	66	545	1700	1740
	531	Hamdullah	26	,,	172	152	45	40	136	110	66	535	1610	1630
	532	Bahauddin	32	,,	175	151	51	36	134	117	65	540	1620	1610
	533	Alim	35	,,	178	140	†	†	131	113	60	530	1620	1620
	534	Niaz	40	,,	187	147	45	39	140	106	60	540	1570	1620
	535	Ramatulla	26	,,	180	152	54	31	134	122	74	525	1700	1710
Hami	301	Sibir	50	Hami	195	153	50	37	126	120	67	564	1530	1530
	302	Muhd. Niaz	50	,,	190	153	50	37	134	128	67	560	1610	1650
	303		60	,,	192	142	50	36	130	120	70	553	1670	1660
	304		28	,,	179	155	50	39	118	120	70	537	1650	1700
	305	Yolbash	18	,,	179	159	46	34	127	118	73	544	1640	1730
	306	Usman Shah	30	Khomali	188	158	42	40	137	115	58	563	1660	1620
	307	Tokhte Md.	38	Hami	192	157	49	36	125	120	67	560	1590	1650
	308	Khwaja Nizah	38		189	163	54	36	120	122	70	550	1640	1570
	309	Sharif	56	Tashara	189	149	50	39	122	115	67	550	1520	1530
	310	Md. Sharif	60	,,	183	160	54	41	123	120	70	547	1630	1640
	311	Yar Muhammad	31	,,	192	143	47	38	125	120	67	548	1650	1680
	312	Abdul Md.	45	,,	196	146	45	36	126	106	56	562	1650	1690
	313	Shamshe	53?	Hami	186	155	46	42	132	110	64	558	1630	1620
	314	Roze Md.	30	Tashara	192	147	47	39	133	120	69	552	1590	1600
	315	Rashiuddin	47	,,	184	151	49	39	129	113	68	544	1600	1610
	316	Arshiuddin	25	,,	184	155	49	37	124	116	70	548	1720	1780
	317	Gul Md.	28	,,	188	151	45	35	127	104	67	557	1570	1540
	318	Md. Nur	36	,,	190	142	53	35	126	116	71	544	1640	1640
	319	Abdul Khalik	22	,,	179	155	45	36	126	110	61	545	1650	1690
	320	Tokhta Niaz	37	,,	193	150	49	42	141	116	68	562	1710	1730
	411	Ismail	22	Hami	189	160	48	40	129	121	69	558	1680	1700
Charkhlik	260	Aziz	25	Charkhlik	161	172	52	40	142	116	71	574	1740	1750
	261	Allakulla	29	,,	197	159	47	39	137	118	67	580	1750	1870
	262	Islam	38	,,	199	160	51	37	135	120	73	582	1760	1800
	263	Iman	30	,,	200	155	52	44	140	129	77	581	1750	1730
	264	Islam	36	,,	198	153	54	40	133	125	75	570	1720	1730
	265	Islam	38	,,	200	156	43	39	134	111	68	581	1690	1690
	266	Roze	18	,,	191	150	43	35	135	122	70	555	1720	1750
	267	Tulumkulla	60	,,	190	156	47	44	134	111	69	560	1580	1600
	268	Ata Md.	40	,,	194	156	51	37	137	122	75	561	1610	1650
	269	Sultan	30	,,	190	155	49	39	143	123	74	568	1690	1750
	333a	Khalpak	45	.	179	146	40	30	119	90	56	540	1530	1540
	334a	Kepek	55	,,	178	142	46	31	122	102	63	540	1600	1630
Loplik	300	Amer	40	Abdal	183	155	51	36	127	96	65	560	1730	1740
	301a	Siddik	46	,,	196	153	59	36	132	126	76	590	1760	1790
	303a	Yakhan	35	,,	198	145	41	30	126	109	67	575	1690	1660
	304a	Abdullah	20	,,	200	160	41	34	133	116	69	590	1760	1760
	305a	Baki	20	,,	181	145	50	34	126	106	63	540	1670	1690
	306a	Otbaskan	37	,,	189	144	50	35	126	108	73	560	1720	1750
	307a	Niaz	25	,,	198	159	44	37	148	114	64	600	1800	1780
	308a	Osman	30	,,	190	151	46	36	133	111	61	570	1740	1760

511. *Left arm broken; chin sunken; nose prominent; large goitre. 513. Prominent cheek-bones. 514. Narrow lower face.
515. Head curiously pointed. 521. Toothless. 522. *Doubtful. No teeth.
525. Head peaked at back. 529. Toothless. 532. Semitic features.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
80	74	84	43	?	Rosy	Lt.	Abs.	Grey	Curly	Ab.	L.O.	Cx.	St.	Cultivator.
81	81	88	52	102	,,	Med.	,,	,,	,,	,,	,,	,,	Aq.	,,
87	74	84	49	100	,,	Dk.	,,	Ch. br.	,,	,,	,,	,,	St.	,,
89	82	70	41	97	,,	,,	,,	Dk. br.	,,	Sc.	S.O.	,,	,,	,,
80	82	83	49	102	,,	Med.	,,	Grey	,,	Ab.	L.O.	,,	,,	,,
86	71	76	46	101	,,	Dk.	,,	Dk. br.	,,	,,	W.	,,	Aq.	,,
86	61	101	55	103	,,	Med.	,,	,,	,,	,,	L.O.	,,	,,	,,
83	69	86	50	101	,,	Dk.	,,	,,	?	Nil	,,	,,	St.	,,
86	65	86	49	103	,,	Med.	,,	,,	Curly	Ab.	,,	,,	,,	,,
82	71	74	46	100	,,	Dk.	,,	,,	,,	Mod.	W.	,,	,,	,,
77	82	87	45?	98	,,	,,	,,	Grey	,,	Ab.	Sq.	,,	Sin.	,,
80	78	89	39*	99	,,	,,	,,	Wh.	,,	,,	S.O.	,,	Aq.	,,
76	84	81	42	98	,,	Med.	,,	Grey	,,	,,	,,	,,	,,	,,
84	74	89	52	101	,,	Dk.	,,	Blk.	,,	,,	L.O.	,,	Sin.	,,
89	75	83	46	102	Rosy br.	,,	,,	,,	,,	,,	Ob.	,,	St.	,,
96	76	85	50	98	Rosy	,,	,,	,,	?	Nil	R.	,,	,,	
80	65	86	51?	97	,,	,,	,,	Grey	Curly	Ab.	L.O.	,,	,,	Cultivator.
92	71	91	49	100	,,	,,	,,	Ch. br.	,,	,,	,,	,,	,,	,,
88	82	82	47?	104	,,	,,	,,	Grey	,,	,,	Ob.	,,	Aq.	,,
82	77	79	46	102	,,	Med.	,,	Dk. br.	,,	,,	L.O.	,,	St.	Yūz-bashi.
88	89	81	49	101	Rosy br.	Dk.	,,	Blk.	,,	Mod.	S.O.	,,	,,	
86	71	87	49	99	Rosy	,,	,,	,,	,,	Ab.	L.O.	,,	Aq.	Cultivator.
79		86	46	100	,,	Med.	,,	Dk. br.	,,	,,	Ob.	,,	†	
79	87	76	43	103	Rosy br.	Dk.	,,	Blk.	,,	Sc.	W.	,,	St.	Cultivator.
84	57	91	55	101	Rosy	L.	,,	Dk. br.	,,	Ab.	L.O.	,,	Aq.	
78	74	95	53	100	,,	Dk.	,,	,,	,,	,,	,,	,,	St.	Mulla.
81	74	96	50	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	Bootmaker.
74	72	92	54	99										
87	78	102	59	103										
89	74	93	57	105	Rosy	Dk.	Abs.	Dk. br.	Curly	Sc.	S.O.	Cx.	St.	Trader.
84	95	84	42	98										
81	74	96	54	104										
86	67	102	58	96										
79	78	98	55	101										
87	76	98	57	101	Rosy	Med.	Abs.	Dk. br.	Curly	Ab.	L.O.	Cx.	St.	Cultivator.
74	81	98	54	102	,,	Dk.	,,	Blk.	,,	Sc.	,,	,,	Conc.	,,
75	80	84	44	102	,,	Med.	,,	Dk. br.	,,	Ab.	,,	,,	St.	Iman.
83	91	83	48	99	,,	,,	,,	,,	,,	,,	,,	,,	,,	Cultivator.
77	83	90	52	101	Rosy br.	Dk.	,,	,,	,,	,,	,,	,,	,,	,,
82	80	88	53	101	,,	,,	,,	,,	,,	,,	W.	,,	,,	,,
84	76	94	56	104	Rosy	Med.	,,	,,	,,	Sc.	,,	,,	,,	,,
80	78	82	53	98	Rosy yell.	Dk.	Pres.	,,	,,	,,	Ob.	,,	Conc.	,,
74	66	92	56	100	Rosy	Med.	Abs.	Ch. br.	,,	Ab.	W.	,,	St.	,,
87	80	87	48	102	,,	Dk.	,,	Blk.	,,	Sc.	S.O.	,,	,,	,,
78	85	82	48	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
85	83	94	53	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	Sin.	,,
94	77	82	50	101	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
81	83	86	49	107	,,	,,	,,	,,	,,	,,	E.U.	,,	,,	,,
80	73	89	54	102	,,	Med.	,,	,,	,,	,,	,,	,,	,,	,,
78	85	92	55	99	,,	,,	,,	,,	,,	Ab.	L.O.	,,	,,	,,
77	74	94	56	101	,,	Dk.	,,	,,	,,	Sc.	,,	,,	,,	,,
78	91	83	51	100	,,	Med.	,,	,,	,,	,,	,,	,,	Conc.	,,
79	81	91	52	102	,,	Dk.	,,	,,	,,	,,	S.O.	,,	St.	,,
82	94	83	51	101	,,	,,	,,	Grey	,,	,,	Ob.	,,	,,	,,
80	73	89	55	102	,,	,,	,,	Blk.	,,	Ab.	L.O.	,,	Sin.	,,
82	80	86	52	104	,,	Med.	,,	Dk. br.	,,	Sc.	R.	,,	St.	,,
87	75	76	47	101	,,	,,	,,	Blk.	,,	Ab.	S.O.	,,	,,	,,
80	67	84	52	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	Weaver.
85	71	76	51	101	,,	,,	,,	,,	,,	Sc.	,,	,,	,,	Cultivator and shepherd.
78	61	95	58	102	,,	,,	,,	Dk. br.	,,	Ab.	L.O.	,,	,,	Cultivator and hunter.
73	73	86	53	98	,,	,,	,,	Blk.	,,	Sc.	W.	,,	,,	Cultivator and fisher.
80	83	87	52	100	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,, ,,
80	68	84	50	101	,,	,,	,,	,,	,,	,,	,,	,,	,,	Servant.
76	70	86	58	102	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	Cultivator.
80	84	77	43	99	,,	,,	,,	Blk.	,,	,,	S.O.	,,	,,	,,
79	78	83	46	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,

533. †Nose dwarfed by disease.
303a. No beard, scanty moustache.

267. Mongolian type.
304a. No beard, scanty moustache.

300. No beard, scanty moustache.
307a. No beard.

TABLE 1. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Loplik	309a	Asan	30	Abdal	202	151	43	37	124	94	61	570	1710	1730
	310a	Abek	35	,,	195	144	42	41	124	115	73	570	1610	1660
	311a	Sahib	40	,,	201	154	48	39	136	119	71	590	1700	1720
	312a	Niaz..	30	,,	188	148	44	39	123	118	77	550	1720	1760
	313a	Mohammad..	20	,,	190	154	43	33	127	109	63	550	1550	1570
	314a	Mulla	22	,,	195	154	46	31	126	118	60	570	1660	1690
	315a	Ataullah	20	,,	201	151	48	34	131	105	67	580	1670	1690
	316a	Musa	39	,,	207	153	44	35	133	117	67	610	1630	1660
	317a	Nurullah	22	,,	180	152	45	37	124	115	68	560	1640	1660
	318a	Niaz Khoji	45	,,	200	156	42	38	137	107	71	575	1690	1690
	319a	Ataullah	40	,,	194	148	52	38	134	122	73	590	1770	1800
	320a	Tokhtasun	43	,,	195	155	45	45	130	121	75	570	1650	1630
	321a	Tapalde..	18	,,	181	148	49	36	124	102	64	570	1610	1610
	322a	Mohammad..	25	,,	184	140	42	33	123	108	62	540	1670	1690
	323a	Md. Tokhta	45	,,	192	149	46	34	132	118	73	580	1700	1730
	324a	Atekelgan	40	,,	200	146	49	37	132	118	79	565	1850	1850
	325a	Kechikula	35	,,	196	141	49	29	132	111	72	570	1650	1690
	326a	Kurban	39	,,	195	152	55	36	127	114	71	580	1710	1730
	327a	Use ..	23	,,	194	149	45	32	133	102	66	570	1540	1560
	328a	Aghebergen	43	,,	193	149	47	32	131	117	73	570	1650	1670
	329a	Kasim	33	,,	189	160	39	38	126	96	61	570	1610	1640
	330a	Tamir Akhun	40	,,	190	151	52	37	128	110	71	560	1790	1810
	331a	Ataullah	40	,,	198	153	45	37	136	122	77	575	1640	1660
	332a	Niaz..	45	,,	195	152	47	35	135	104	74	560	1780	1780
	335a	Nimat Beg ..	68	,,	162	207	49	36	144	109	73	610	1620	1620
	336a	Mulla Shah	56	,,	151	194	50	35	131	112	67	550	1780	1810
	337a	Tokhtasun	25	,,	146	186	49	30	126	96	64	550	1770	1750
	338a	Niaz Baki	68	,,	154	205	52	36	131	107	64	590	1770	1700
	339a	Tukhti Akhun	47	,,	155	195	52	34	136	109	68	570	1640	1650
	340a	Islam	36	,,	152	194	49	35	143	122	74	570	1760	1800
Chinese	347a	Hsing-ling	22	Nan-hu	187	143	41	44	117	109	62	565	1590	1640
	348a	Hsing-yung	36	,,	188	145	45	35	130	116	68	580	1640	1740
	349a	Lo-yeh	27	,,	186	144	44	31	122	113	70	580	1640	1640
	350a	Hsing-fang		,,	192	145	40	37	134	112	67	590	1620	1650
	351a	Hsing-fang	54	,,	187	148	48	33	118	115	68	550	1690	1650
	352a	Hsing-fang	36	,,	192	140	50	31	132	124	72	570	1670	1720
	353a	Wang-chiang	37	,,	200	143	43	31	128	114	68	610	1700	1680
	354a	Sha-suan	40	,,	183	143	52	37	126	127	72	550	1630	1640
	355a	Hsing-fang		,,	202	147	47	27	132	127	69	590	1750	1740
	356a	Hsing-mung	41	,,	189	153	41	29	118	113	59	570	1660	1680
	357a	Hsing-huang	45	,,	192	153	47	42	127	118	64	580	1600	1550
	358a	Hsing-fu	41	,,	196	152	47	40	137	116	72	570	1730	1720
	341a	Wu-chung	28	Tun-huang	196	152	46	39	134	119	75	590	1780	1700
	342a	Tang-shuan	45	,,	194	149	51	32	124	135	72	570	1710	1690
	343a	Shang-ti-fu	20	,,	190	141	42	39	123	107	69	550	1580	1580
	344a	Tu-fu-huang	34	,,	194	152	45	32	127	119	72	570	1650	1640
	345a	Shu-shu-li	44	,,	190	142	50	41	122	131	80	550	1720	1750
	346a	Kua-yü-chang	46	,,	189	146	47	38	126	117	77	570	1660	1640
	359a	Li-chi-hsing	18	,,	189	148	35	32	122	98	57	530	1650	1670
	360a	Hsing-sun	48	Nan-hu	200	150	43	32	134	114	64	570	1670	1670
Keriya	408b	Islam	35	Keriya	177	155	46	39	128	105	58	533	1620	1660
	409b	Rustam	27	,,	188	155	48	40	132	116	65	550	1630	1610
	410b	Roza Akhun	25	,,	179	150	49	35	131	120	67	537	1680	1680
	411b	Kurban	55	,,	191	162	48	43	135	112	63	571	1770	1700
	412b	Ibrahim	25	,,	188	151	47	37	125	116	67	540	1710	1710
Niya	242	Niaz..	28	Niya	182	158	50	37	137	122	68	543	1550	1530
	243	Tümür	22	,,	171	156	41	37	133	108	59	529	1600	1630
	244	Pasa..	21	,,	180	154	40	36	128	112	64	544	1630	1690
	245	Abdullah	25	,,	185	160	44	41	138	109	62	562	1680	1730
	246	Hasan	18	,,	173	156	50	33	135	112	71	536	1530	1590
	247	Tokhta	30	,,	179	157	43	39	128	106	59	545	1640	1580
	248	Islam	36	,,	182	162	45	40	140	117	67	559	1620	1610
	249	Rustam	36	,,	183	152	53	39	130	120	62	543	1690	1720
	250	Tokhtash	36	,,	175	156	45	34	132	113	60	540	1570	1650
	251	Pasa..	27	,,	179	145	45	36	123	113	63	534	1620	1660
	252	Roze Md.	50	,,	178	166	50	42	131	118	69	550	1630	1650
	253	Ibrahim Akhun	36	,,	174	151	50	38	122	109	58	528	1600	1610

312a. No beard. 313a. No beard. 314a. No beard. 315a. No beard. 316a. No beard.
317a. No beard. 318a. Large beard. 320a. Scanty moustache. 321a. No beard. 323a. No beard.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
75	86	76	49	101	Rosy yell.	Med.	Abs.	Fair	Curly	Sc.	S.O.	Cx.	St.	Cultivator and fisher.
74	98	93	59	103	Rosy	,,	,,	Dk. br.	,,	Ab.	,,	,,	Aq.	Cultivator.
77	81	87	52	101	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
79	89	96	63	102	,,	,,	,,	Blk.	,,	Sc.	,,	,,	,,	,,
81	77	86	50	101	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
78	67	94	48	102	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	Shepherd.
75	71	80	51	101	,,	,,	,,	Fair	,,	,,	S.O.	,,	,,	Cultivator.
74	80	88	50	102	,,	,,	,,	Blk.	,,	,,	,,	,,	,,	,,
84	82	93	55	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	,,	,,
78	90	78	52	100	,,	,,	,,	,,	,,	Ab.	L.O.	,,	,,	,,
76	73	91	54	102	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,
79	100	93	58	99	,,	Bl.	Pres.	Fair	,,	,,	S.O.	,,	Aq.	,,
82	73	82	52	100	,,	Med.	Abs.	Blk.	,,	Sc.	,,	,,	St.	,,
76	79	88	50	101	,,	,,	,,	,,	,,	Nil	L.O.	,,	,,	,,
78	74	89	55	102	,,	,,	,,	Dk. br.	,,	Sc.	S.O.	,,	,,	,,
73	75	89	60	100	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
71	59	84	55	102	,,	,,	Trace	Fair	,,	,,	,,	,,	,,	,,
78	65	90	56	101	,,	,,	Abs.	,,	,,	Ab.	,,	,,	,,	,,
77	71	77	50	101	,,	,,	,,	Dk. br.	,,	Sc.	S.O.	,,	,,	Cultivator and shepherd.
77	68	89	56	101	,,	,,	Trace	Fair	,,	,,	L.O.	,,	,,	Fisher.
85	97	76	48	101	,,	,,	Abs.	,,	,,	,,	S.O.	,,	,,	Cultivator.
79	71	86	55	101	,,	,,	,,	Dk. br.	,,	Ab.	L.O.	,,	,,	Cultivator and hunter.
77	82	90	57	101	,,	,,	,,	Fair	,,	,,	,,	,,	,,	Cultivator.
78	74	77	55	100	,,	,,	,,	Dk. br.	,,	,,	W.	,,	,,	,,
78	73	76	51	100	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	Beg.
77	70	85	51	102	,,	,,	,,	,,	,,	Sc.	S.O.	,,	,,	Cultivator and hunter.
78	61	76	51	99	,,	,,	,,	Blk.	,,	,,	,,	,,	,,	Fisher and hunter.
75	69	82	49	96	,,	Bl.	Pres.	Fair	,,	,,	L.O.	,,	,,	Beg.
79	65	80	50	101	,,	Med.	Abs.	Dk. br.	,,	,,	S.O.	,,	,,	Fisher and hunter.
78	71	85	52	102	,,	Dk.	,,	Fair	,,	,,	,,	,,	,,	Fisher and weaver.
76	107	93	53	103	Yell. wh.	,,	,,	Blk.	St.	Nil	L.O.	,,	Aq.	Cultivator.
78	78	89	52	106	,,	,,	Pres.	,,	,,	,,	S.O.	,,	St.	,,
77	70	93	57	100	Rosy	Med.	,,	,,	,,	,,	L.O.	,,	,,	,,
76	93	84	50	102	Yell. wh.	,,	Abs.	,,	,,	Sc.	,,	,,	,,	,,
79	69	97	58	98	,,	Dk.	Pres.	Dk. br.	,,	Mod.	,,	,,	,,	,,
73	62	94	55	103	,,	Med.	Abs.	Blk.	,,	Nil	,,	,,	,,	,,
72	72	89	53	99	Rosy	Bl.	Pres.	,,	,,	,,	,,	,,	,,	,,
78	71	101	57	101	Yell. wh.	Med.	Abs.	,,	,,	Mod.	,,	,,	,,	,,
73	57	96	52	99	,,	Dk.	Pres.	,,	,,	Sc.	,,	,,	,,	,,
81	71	96	50	101	,,	,,	Abs.	Dk. br.	,,	,,	,,	,,	,,	,,
77	89	93	50	97	,,	Med.	,,	Blk.	,,	,,	S.O.	,,	Aq.	,,
78	85	85	53	93	Rosy	Dk.	Pres.	Fair	Curly	Mod.	L.O.	,,	St.	,,
78	85	89	56	96	Yell. wh.	,,	Abs.	Blk.	St.	Sc.	,,	,,	,,	Soldier.
77	63	109	58	99	Rosy	Med.	,,	Dk. br.	,,	,,	,,	,,	,,	Yamen peon.
74	93	87	56	100	,,	Bl.	Pres.	,,	,,	Nil	S.O.	,,	,,	Soldier.
78	71	94	57	99	Yell. wh.	Dk.		Blk.	,,	,,	,,	,,	Aq.	Yamen peon.
75	82	107	66	102	,,	,,		,,	,,	,,	L.O.	,,	,,	Soldier.
77	81	93	61	99	Rosy	Bl.	Pres.	,,	,,	Ab.	S.O.	,,	St.	,,
80	91	80	47	101	,,	Med.	Abs.	,,	,,	Nil	,,	,,	,,	,,
75	74	85	48	100	Yell. wh.	,,	,,	,,	,,	Mod.	L.O.	,,	Aq.	Cultivator.
88	85	82	45	102	Rosy	Dk.	,,	Dk. br.	Curly	Sc.	S.O.	,,	St.	Shepherd.
82	83	88	49	99	,,	,,	,,	,,	,,	,,	L.O.	,,	,,	,,
84	71	92	51	100	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	Cultivator.
85	90	83	47	96	Rosy dk.	Med.	,,	,,	,,	Ab.	L.O.	,,	,,	,,
80	79	93	54	100	Rosy	,,	,,	,,	,,	Sc.	,,	,,	,,	Shepherd.
87	74	89	50	99	,,	,,	,,	,,	,,	Ab.	S.O.	,,	,,	Cultivator.
91	90	81	44	102	,,	,,	,,	Blk.	,,	,,	,,	,,	,,	,,
86	90	88	50	104	,,	Fair	,,	Dk. br.	,,	,,	,,	,,	,,	,,
86	93	79	45	103	,,	,,	,,	Fair	,,	Mod.	Sq.	,,	,,	,,
90	66	83	53	104										
88	91	83	46	96	Rosy	Med.	Abs.	Dk. br.	Curly	Ab.	W.	Cx.	St.	Cultivator.
89	89	84	48	99	,,	Dk.	,,	L. br.	,,	,,	S.O.	,,	Sin.	,,
83	74	92	48	102	,,	Med.	,,	Ch. br.	,,	,,	L.O.	,,	St.	,,
89	76	86	45	105	,,	,,	,,	Dk. br.	,,	,,	W.	,,	,,	,,
81	80	92	51	102	,,	,,	,,	L. br.	,,	Mod.	L.O.	,,	,,	,,
93	84	90	53	101	,,	Bl.	,,	Ch. br.	,,	Ab.	,,	,,	Sin.	,,
87	76	89	48	101	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	,,	Cultivator and mill-owner.

329a. No beard.
411b. Grey-haired.
336a. No beard.
245. Jaws very broad and square.
337a. No beard.

TABLE 1. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
	254	Sale Mullah	30	Niya	186	147	48	37	132	116	73	555	1680	1710
	255	Tursun	18	,,	183	144	45	36	130	116	64	537	1690	1760
Niya	256	Kurban	16	,,	170	144	40	34	119	108	58	520	1610	1650
	257	Khuda-berdi	29	,,	181	155	41	40	126	109	61	543	1690	1660
	258	Yusuf	20	,,	181	155	49	37	128	107	65	550	1670	1650
	259	Niaz..	16	,,	170	152	44	36	120	109	59	529	1550	1610
	536	Tare..	28	Polur	189	144	54	41	143	112	65	542	1690	1680
	537	Yusuf	32	,,	174	161	46	37	140	126	69	545	1670	1690
	538	Sayid	22	,,	186	149	50	39	136	102	64	540	1720	1725
	539	Ahmad	26	,,	194	147	40	31	133	110	61	565	1710	1670
	540	Tokhta	32	,,	197	152	47	39	135	108	72	575	1710	1740
	541	Fasa..	52	,,	187	145	62	42	135	119	71	550	1680	1700
	542	Md. Shah.	28	,,	184	146	50	33	139	108	72	540	1630	1640
	543	Tursun	28	,,	183	156	55	37	135	125	74	540	1700	1690
	544	Kasim	27	,,	194	158	52	37	150	119	75	570	1720	1770
	545	Karim	40	,,	171	153	50	36	132	115	62	525	1540	1520
	546	Yusuf	27	,,	190	145	48	40	132	111	65	530	1680	1640
	547	Saiyid	33	,,	184	157	60	32	139	129	78	560	1700	1690
	548	Tursun	34	,,	190	147	51	34	144	120	61	560	1610	1590
	549	Kurban	49	,,	187	150	49	36	138	129	71	550	1590	1610
	550	Ibrahim	47	,,	182	152	52	44	141	117	67	550	1680	1670
Polur	551	Yunus	28	,,	185	147	48	33	142	111	68	555	1630	1630
	552	Tokhta Roze	45	,,	192	146	50	41	139	126	69	550	1670	1660
	553	Pasa Niaz	40	,,	178	153	52	34	136	119	73	545	1575	1580
	554	Muhammad	25	,,	184	139	51	39	130	115	66	530	1580	1580
	555	Isman	20	,,	178	145	43	35	129	119	63	530	1560	1560
	556	Aman	40	,,	171	150	51	39	135	119	67	525	1530	1530
	557	Tursun	26	,,	181	155	45	30	142	105	67	550	1660	1660
	558	Roze	40	,,	180	144	50	32	133	111	64	525	1580	1540
	559	Tokhtash	60	,,	192	144	51	40	138	115	54	550	1650	1640
	560	Timir Shah	60	,,	185	152	53	39	138	106	64	514	1565	1540
	561	Karim	40	,,	187	150	46	35	142	114	63	550	1700	1660
	562	Kurban	50	,,	177	150	50	31	146	115	70	520	1630	1690
	563	Roze	25	,,	189	147	50	33	140	117	72	505	1690	1690
	564	Muhammad	25	,,	190	150	44	39	140	109	67	555	1650	1650
	565	Md. Sope	45	,,	198	156	50	35	138	117	65	570	1710	1710
	566	Niaz..	36	,,	190	161	47	37	145	111	67	570	1570	1620
	414b	Nurullah	42	Ak-su	189	164	64	33	139	131	72	575	1680	1650
	415b	Mullah Tatlik	40	,,	175	166	58	33	145	125	78	560	1720	1770
	416b	Saiyid	25	,,	163	152	50	33	140	109	67	533	1700	1710
	417b	Islam	48	,,	174	148	52	35	135	109	67	533	1640	1710
	418b	Muhammad	35	,,	171	144	49	38	141	114	62	540	1630	1710
	419b	Kasim	47	,,	174	154	56	33	139	110	64	535	1520	1580
Ak-su	420b	Tümür	36	,,	175	154	49	39	127	104	71	550	1630	1680
	421b	Sidik	40	,,	175	165	45	44	153	102	66	550	1630	1740
	422b	Sipurghe	56	,,	167	155	55	37	140	110	65?	545	1650	1730
	423b	Md. Aziz	47	,,	182	158	49	41	142	112	71	550	1620	1640
	424b	Sabir	50	,,	162	150	54	32	132	105	65	525	1580	1650
	425b	Ibrahim	43	,,	172	148	50	41	138	103	62	530	1670	1750
	457	Hussain	27	,,	182	157	56	36	137	118	69	550	1620	1670
	322	Kurban	20	Faizabad	179	164	47	35	136	108	65	553	1580	1640
	496	Safar Md.	56	,,	185	145	54	37	137	126	72	565	1730	1770
	497	Rajab Bai	45	,,	177	155	56	44	145	118	65	535	1670	1700
	498	Shah Md.	35	,,	176	158	56	31	140	122	78	540	1670	1680
	499	Md. Ghafur	34	Badakhshan	193	155	57	34	140	128	72	565	1670	1780
Faizabad	500	Harkesh Bai	42	,,	176	158	58	38	147	116	69	540	1600	1720
	501	Muhd. Karim	38	,,	172	152	55	33	140	114	61?	515	1620	1730
	502	Ashur Muhd.	35	,,	190	158	49	35	146	126	70	565	1670	1760
	503	Sang Muhd.	36	,,	178	154	51	40	140	125	60	535	1700	1770
	504	Barat Muhd.	36	,,	188	152	50	36	153	119	55	550	1660	1680
	505	Ibrahim Khan	42	,,	187	154	62	35	145	136	78	550	1760	1840
	413b	Tokhta	20	Kashgar	182	155	49	36	134	120	70	556	1700	1720
	465	Ibrahim	45	Kelpin	182	161	52	37	135	120	70	570	1670	1730
Kelpin	466	Tokhta	35	,,	175	145	47	33	125	110	62	525	1625	1650
	467	Tokhta	45	,,	179	155	54	39	147	112	71	550	1640	1740
	468	Osman	58	,,	173	150	42	39	143	101	55?	540	1650	1745

258. Galcha type. 546. Pointed head. 547. Arched nose. 554. Type Kashmiri or Dard.
555. Ancestors said to have come from Ladak or Baltistan. 559. No teeth.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
79	77	88	55	102	Rosy	Dk.	Abs.	Ch. br.	Curly	Ab.	L.O.	Cx.	St.	Cultivator.
79	80	90	49	104	,,	Med.	,,	Dk. br.	,,	Mod.	S.O.	,,	,,	,,
85	85	91	53	102	,,	Dk.	,,	Blk.	,,	,,	R.	,,	,,	,,
86	98	87	48	98	,,	Bl.	,,	L. br.	,,	Ab.	L.O.	,,	Conc.	,,
86	76	84	51	99	,,	,,	,,	Fair	,,	,,	S.O.	,,	St.	,,
89	82	91	49	104	,,	Med.	,,	Dk. br.	,,	Sc.	W.	,,	,,	,,
76	76	78	45	99	,,	,,	,,	Ch. br.	,,	Ab.	L.O.	,,	,,	,,
93	80	90	49	101	,,	Dk.	,,	Dk. br.	,,	Sc.	Ob.	,,	Sin.	Carpenter.
80	78	75	47	100	,,	,,	,,	,,	,,	,,	S.O.	,,	St.	Cultivator.
76	77	83	46	98	,,	,,	,,	Ch. br.	,,	Ab.	L.O.	,,	,,	,,
77	83	80	53	102	,,	,,	,,	Dk. br.	,,	Mod.	W.	,,	Sin.	,,
78	68	88	53	101	,,	,,	,,	,,	,,	Ab.	Ob.	,,	,,	,,
79	67	78	52	101	,,	,,	,,	Blk.	,,	,,	A.	,,	,,	,,
85	67	93	55	99	,,	,,	,,	Dk. br.	,,	Mod.	L.O.	,,	St.	,,
81	71	79	50	103	,,	,,	,,	,,	,,	,,	W.	,,	,,	Tailor.
89	72	87	47	98	,,	,,	,,	,,	,,	Sc.	S.O.	,,	Sin.	Cultivator.
76	83	84	49	98	,,	,,	,,	,,	,,	,,	Loz.	,,	St.	,,
85	53	93	56	99	,,	,,	,,	,,	,,	Ab.	L.O.	,,	Aq.	,,
77	67	83	42	99	,,	,,	,,	Fair	,,	,,	S.O.	,,	St.	,,
80	73	93	51	101	Rosy br.	,,	,,	Dk. br.	,,	,,	Ob.	,,	Conc.	,,
84	85	83	48	99	Rosy	,,	,,	,,	,,	,,	L.O.	,,	St.	,,
79	69	78	48	100	,,	,,	,,	,,	,,	,,	S.O.	,,	,,	,,
76	82	91	50	99	,,	,,	,,	,,	,,	Mod.	L.O.	,,	Sin.	Herdsman.
86	65	87	54	100	,,	,,	,,	Ch. br.	,,	Ab.	S.O.	,,	St.	Cultivator.
76	77	88	51	100	Rosy br.	,,	,,	Blk.	,,	,,	,,	,,	,,	,,
81	81	92	49	100	,,	,,	,,	,,	?	V. sc.	R.	,,	St.	,,
88	76	88	50	100	,,	,,	,,	,,	Curly	Ab.	S.O.	,,	Sin.	,,
86	67	74	47	100	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
80	64	83	48	97	Rosy	,,	,,	,,	,,	,,	L.O.	,,	,,	Herdsman.
75	78	83	39	99	,,	Med.	,,	Dk. br.	,,	,,	,,	,,	Aq.	
82	74	77	46	98	,,	,,	,,	,,	,,	,,	S.O.	,,	St.	Cultivator.
80	76	80	44	98	,,	Dk.	,,	Blk.	,,	,,	L.O.	,,	,,	,,
85	62	79	48	104	Rosy br.	Med.	,,	Dk. br.	,,	,,	W.	,,	,,	,,
78	66	84	51	100	Rosy	Dk.	,,	Blk.	,,	Sc.	L.O.	,,	,,	,,
79	89	78	48	100	,,	,,	,,	,,	,,	Nil	S.O.	,,	,,	Herdsman.
79	70	85	47	100	Rosy br.	Med.	,,	,,	,,	Ab.	L.O.	,,	,,	Cultivator.
85	79	77	46	103	Rosy	Dk.	,,	,,	,,	,,	R.	,,	Sin.	Ming-bashi.
87	52	94	52	98	Rosy br.	,,	,,	Dk. br.	W.	Sc.	L.O.	,,	Aq.	Mullah.
95	57	86	54	103	Rosy	Med.	,,	,,	,,	Mod.	,,	,,	St.	,,
93	66	78	48	101	,,	,,	,,	Ch. br.	,,	Sc.	W.	,,	,,	Cultivator.
85	67	81	50	104	,,	Dk.	,,	Blk.	,,	,,	Ob.	,,	,,	Pedlar.
84	78	81	44	105	Yell. rosy	,,	,,	,,	,,	Ab.	L.O.	,,	,,	Cobbler.
89	59	80	46	104	Rosy	Med.	,,	Dk. br.	,,	,,	Ob.	,,	,,	Cultivator.
88	80	82	56	103	,,	Dk.	,,	Fair	,,	Sc.	W.	,,	,,	,,
94	98	67	43	107	Rosy br.	,,	,,	Dk. br.	,,	Ab.	S.O.	,,	Conc.	,,
93	67	79	46	105	Rosy	,,	,,	,,	,,	,,	L.O.	,,	Sin.	Cobbler.
87	84	79	50	101	Yell. rosy	,,	,,	Blk.	,,	,,	S.O.	,,	St.	Darogha.
93	59	80	49	104	Rosy br.	,,	,,	,,	,,	,,	L.O.	,,	,,	Darogha and cultivator.
86	82	75	45	105	Rosy	,,	,,	Dk. br.	,,	Sc.	W.	,,	,,	Cultivator.
86	64	86	50	103	,,	,,	,,	,,	,,	Ab.	L.O.	,,	,,	,,
92	74	80	48	104	Rosy br.	Med.	,,	,,	Curly	,,	S.O.	,,	,,	,,
78	69	92	53	102	Rosy	,,	,,	Grey	W.	,,	L.O.	,,	,,	Trader.
88	79	81	45	102	,,	,,	,,	Ch. br.	,,	,,	,,	,,	,,	,,
90	55	87	56	101	,,	,,	,,	Dk. br.	,,	,,	,,	,,	Aq.	,,
80	60	91	51	107	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
90	66	79	47	107	Rosy br.	Dk.	,,	,,	,,	,,	,,	,,	Sin.	,,
88	60	81	44	107	Rosy	Med.	,,	,,	,,	,,	W.	,,	St.	,,
83	71	86	48	105	Rosy br.	Dk.	,,	,,	,,	,,	L.O.	,,	,,	,,
87	78	89	43	104	Rosy	,,	,,	Blk.	,,	,,	,,	,,	,,	,,
81	72	78	36	101	,,	,,	,,	Ch. br.	,,	,,	S.O.	,,	,,	,,
82	57	94	54	105	V. florid	Bl.	,,	Dk. br.	,,	,,	L.O.	,,	Aq.	Soldier.
85	73	90	52	101	Rosy	Med.	,,	,,	Curly	Sc.	,,	,,	St.	Cultivator.
88	69	89	52	104	,,	Dk.	,,	Blk.	W.	Ab.	,,	,,	Sin.	,,
83	70	88	50	102	,,	,,	,,	Dk. br.	,,	,,	Ob.	,,	St.	,,
87	72	76	48	106	,,	Fair	,,	Ch. br.	,,	,,	L.O.	,,	,,	,,
87	93	71	38	106	,,	Bl.	,,	Dk. br.	,,	,,	,,	,,	Sin.	,,

421b. Very dark complexion.
322. Emigrated to Hami.
457. High head; deep-set eyes of Mongolian shape.
505. European look.

TABLE I. LIST OF

	No.	Name.	Age.	Locality.	1	2	3	4	9	9a	U.F.L.	H.Cir.	16	20
Kelpin	469	Kurban	18	Kelpin	173	164	46	38	138	116	60	540	1620	1700
	470	Alakele	36	,,	183	158	50	35	146	116	65	545	1700	1800
	471	Kadir	19	,,	170	156	46	35	139	98	59	545	1550	1580
	472	Abdulla	49	,,	198	157	52	43	155	129	74	585	1740	1770
	473	Kasim	25	,,	189	151	47	40	137	117	67	535	1690	1700
	474	Yolboldi	45	,,	184	157	51	44	145	109	70	560	1640	1700
	475	Muhd. Kule	59	,,	192	167	45	42	151	127	72	580	1660	1730
	476	Yunus	46	,,	178	164	48	40	134	115	67	545	1630	1670
	477	Hakul	45	,,	177	178	51	41	141	106	64	530	1680	1740
	478	Niaz..	39	,,	173	152	46	38	142	111	64	530	1670	1760
	479	Khuda-berdi	37	,,	181	160	52	36	145	115	69	550	1590	1710
Dolan	480	Moshur	52	Tumshuk	182	150	48	38	138	119	72	535	1570	1640
	481	Niaz..	60	,,	192	159	57	44	149	115	78	570	1640	1650
	482	Niaz..	55	,,	176	162	53	44	150	116	62	570	1600	1640
	483	Muhammad	30	,,	181	161	50	41	141	109	61	550	1620	1680
	484	Mahmad	35	,,	196	156	50	42	149	120	67	570	1730	1750
	485	Kanje	58	,,	178	155	51	40	147	112	55	540	1610	?
	486	Mahmud	33	,,	181	161	52	44	148	123	69	550	1590	1620
	487	Barat	50	,,	186	146	50	39	140	117	71	530	1630	1760
	488	Bakhtiyar	62	,,	178	155	55	38	143	113	70	535	1620	1650
	489	Aziz	31	,,	185	151	47	37	137	115	65	545	1620	1700
	490	Muhd. Said	18	,,	197	148	50	38	140	117	56	?	1690	1750
	491	Iman	50	,,	180	161	46	33	143	105	63	540	1700	1710
	492	Yoldash	22	,,	181	160	47	40	147	114	67	570	1660	1730
	493	Yunus	17?	,,	180	161	52	37	145	128	77	550	1660	1760
	494	Abdul Hussain	62	,,	180	161	55	45	153	127	69	555	1600	1660
	495	Daulat Beg	42	Charbagh	212	154	56	39	160	124	67	595	1720	1830
Kirghiz	426	Kusup-aldi	50	Kulan-sarik	187	160	52	42	139	125	67	580	1675	1750
	427	Umur	45	Kara-bulak	181	168	53	33	141	129	75	560	1670	1700
	428	Mulla Kurban	36	Soma-tash	182	167	53	40	147	112	61	550	1670	1715
	429	Mulla Yakub	24	Akchik	189	164	48	35	156	113	65	555	1760	1760
	430	Tilab-aldi	27	,,	183	156	55	34	130	122	75	550	1610	1730
	431	Sarbargish	56	Kulan-sarik	183	165	55	43	156	122	70	570	1630	1670
	432	Mambet	37	Kizil-gumbaz	189	161	57	42	136	115	71	570	1640	1710
	433	Kuchuk	40	Kulan-sarik	183	165	53	39	138	119	71	570	1690	1780
	434	Khoja Bai	60	Akchik	173	168	47	41	137	112	66	570	1800	1880
	435	Kadir Ali	26	,,	178	157	46	37	137	108	67	550	1615	1630
	436	Choman	33	,,	185	157	58	38	147	122	68	580	1550	1570
	437	Sayid	63	Kulan-sarik	185	161	44	40	135	106	67?	565	1630	1680
	438	Kalabeg	45	Kungrach	180	157	51	33	147	116	69	560	1630	1700
	439	Suranche	55	Yalanche	187	164	44	40	149	106	66	580	1625	1690
	440	Ibrahim	27	Akchik	186	158	53	36	149	115	74	570	1675	1680
	441	Alim Beg	59	Aktala	174	164	51	34	150	115	65	565	1520	1550
	442	Turdali	28	Safarbai	183	166	49	40	140	108	64	565	1590	1630
	443	Turdakhun	27	Kurban-sarik	184	157	42	36	157	118	65	570	1590	1670
	444	Turde-ala	27	Kara-bulak	181	165	54	40	147	120	63	560	1620	1700
	445	Yusunali	25	Safarbai	188	160	52	40	149	121	65	570	1630	1660
	446	Borbash	26	Akchik	180	161	45	36	149	111	67	555	1690	1765
	447	Karabeg	73	Kizil-gumbaz	198	163	48	41	152	115	64 ?	595	1690	1770
	448	Topbash	40	Akchik	190	162	58	40	156	122	72	580	1700	1850
	449	Jinali	25	Hasabai	167	161	47	40	140	113	65	532	1620	1720
	450	Mangush Bai	38	Kongtai	180	161	43	36	147	103	65	560	1700	1790
	451	Moman Bai	65	,,	180	164	49	42	147	111	71	565	1580	1730
	452	Ata Asam	39	,,	180	154	46	32	146	105	61	550	1570	1710
	453	Nurbeg	67	,,	182	158	52	47	146	124	72	550	1660	1770
	454	Haji	23	,,	175	153	40	35	144	95	50	545	1590	1655
	455	Chiranna	26	,,	173	161	46	33	145	101	60	545	1520	1550
	456	Ruwat	27	,,	189	156	44	35	141	120	55	550	1550	1630
	458	Tawalde	29	Sarbel	184	160	46	39	147	107	69	570	1680	1720
	459	Tungatur	52	,,	194	161	43	34	129	115	68	565	1680	1710
	460	Shalpak	22	,,	180	159	45	40	153	110	65	550	1700	1780
	461	Kōlaki	27	,,	186	154	49	43	153	112	57	570	1760	1810
	462	Kider	24	,,	187	165	52	40	147	126	71	580	1720	1750
	463	Tokhtasun	22	,,	182	155	52	37	141	109	68	550	1550	1620
	464	Musa	20	,,	175	161	50	39	140	116	70	555	1610	1600

472. Galcha or Dard type. 478. Looks like a cross with Kirghiz. 480. Nose bone lost through disease.
485. Hair turning grey. 494. Grey-haired. 495. Eyes slightly Mongolian; unlike other Dolans.
426. Seems to have Sart blood. 427. Mongolian eyes. 428. Mongolian eyes. 429. Mongolian eyes.
430. Mongolian eyes. 435. Mongolian eyes. 438. Seems to have Galcha blood. 443. Mongolian eyes.

INDIVIDUAL MEASUREMENTS (*continued*)

Indices.						Eyes.		Hair.			Face.			
C.	N.	F.	U.F.	S.S.	Skin.	Col.	P. of F.	Col.	Ch.	Am.	Full.	Pro.	N.S.	Profession.
95	83	84	43	105	Rosy br.	Dk.	Abs.	Blk.	W.	Mod.	S.O.	Cx.	St.	Cultivator.
86	70	79	45	106	Yell. rosy	,,	,,	,,	,,	Ab.	L.O.	,,	,,	Bazaar policeman.
92	76	71	42	102	Rosy br.	,,	,,	,,	,,	Sc.	S.O.	,,	,,	Cultivator.
79	83	83	48	102	Rosy	Med.	,,	Dk. br.	,,	Ab.	L.O.	,,	,,	,,
80	85	85	49	101	,,	,,	,,	,,	,,	Mod.	W.	,,	,,	,,
85	86	75	48	104	,,	,,	,,	,,	,,	Ab.	L.O.	,,	,,	,,
87	93	84	48	104	,,	,,	,,	Ch. br.	,,	,,	,,	,,	Aq.	,,
92	83	86	50	102	Rosy br.	,,	,,	Blk.	,,	,,	W.	,,	Sin.	,,
84	80	75	45	104	,,	,,	,,	,,	,,	Sc.	Ob.	,,	St.	,,
88	83	78	45	105	Rosy	Dk.	,,	,,	,,	Ab.	S.O.	,,	,,	,,
88	69	79	48	108	,,	Med.	,,	Dk. br.	,,	,,	L.O.	,,	Conc.	Darogha.
82	80	86	52	104	Rosy br.	,,	,,	Wh.	,,	,,	S.O.	,,	?	Cultivator.
83	77	77	52	101	,,	,,	,,	Grey	,,	,,	L.O.	,,	St.	,,
92	83	77	41	102	Rosy	Dk.	,,	Ch. br.	,,	Mod.	S.O.	,,	,,	,,
89	82	77	43	104	,,	,,	,,	Dk. br.	,,	Ab.	,,	,,	Sin.	,,
80	84	81	45	101	Rosy br.	,,	,,	Blk.	,,	,,	W.	,,	St.	,,
87	78	76	37		Rosy	Med.	,,	Dk. br.	,,	,,	R.	,,	,,	,,
89	85	83	47	102	,,	Dk.	,,	Blk.	,,	Mod.	L.O.	,,	,,	,,
78	78	84	51	102	Rosy br.	Med.	,,	Grey	,,	Ab.	,,	,,	Sin.	,,
87	69	79	49	102	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
82	79	84	47	105	,,	,,	,,	Blk.	,,	Sc.	S.O.	,,	,,	,,
75	76	84	40	104	,,	Dk.	,,	,,	,,	,,	L.O.	,,	,,	,,
89	72	73	44	101	,,	Med.	,,	Dk. br.	,,	Ab.	S.O.	,,	,,	,,
88	85	78	46	104	,,	Dk.	,,	Blk.	,,	Sc.	,,	,,	Sin.	,,
89	71	88	53	106	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	,,	,,
89	82	83	45	104	,,	Med.	,,	Ch. br.	,,	Ab.	,,	,,	St.	Village headman.
73	70	78	42	106	,,	,,	,,	Dk. br.	,,	,,	W.	,,	,,	Beg.
86	81	90	48	104	,,	,,	,,	,,	,,	,,	L.O.	,,	Conc.	Headman.
93	62	91	53	102	,,	,,	,,	,,	,,	So.	,,	,,	Aq.	
92	76	76	41	103	,,	Dk.	,,	,,	,,	,,	S.O.	,,	St.	Herdsman.
87	73	72	42	100	,,	,,	,,	Blk.	,,	Sc.	W.	,,	Conc.	,,
85	62	94	58	107	,,	,,	,,	,,	,,	,,	,,	,,	St.	,,
90	78	78	45	102	Rosy	Med.	,,	Dk. br.	,,	Mod.	L.O.	,,	Sin.	,,
85	74	85	52	104	,,	Dk.	,,	Blk.	,,	Ab.	S.O.	,,	,,	,,
90	74	86	51	105	Rosy br.	,,	,,	,,	,,	Sc.	L.O.	,,	St.	,,
97	87	82	48	104	Rosy	Med.	,,	Dk. br.	,,	Mod.	S.O.	,,	,,	,,
88	80	79	49	101	,,	Dk.	,,	Blk.	,,	Pc.	,,	,,	,,	,,
85	66	83	46	101	Rosy br.	,,	,,	Dk. br.	,,	Sc.	W.	,,	,,	,,
87	91	79	50?	103	Rosy	Med.	,,	Blk.	,,	,,	L.O.	,,	,,	,,
87	65	79	47	104	,,	Fair	,,	Fair	,,	Mod.	S.O.	,,	,,	,,
88	91	71	44	104	,,	Med.	,,	Blk.	,,	Ab.	L.O.	,,	Sin.	Cultivator and servant.
85	68	77	50	100	Rosy br.	Dk.	,,	Dk. br.	,,	Sc.	,,	,,	St.	Herdsman.
94	67	77	43	102	,,	Med.	,,	Blk.	,,	,,	W.	,,	Sin.	,,
91	82	77	46	103	Rosy	,,	,,	Dk. br.	,,	,,	L.O.	,,	St.	,,
85	86	75	41	105	Rosy br.	Dk.	,,	Blk.	,,	,,	S.O.	,,	,,	,,
91	74	82	43	105	Rosy	Med.	,,	,,	,,	,,	,,	,,	,,	,,
85	77	81	44	102	Rosy br.	,,	,,	Dk. br.	,,	Mod.	,,	,,	,,	,,
89	80	75	45	104	Rosy	Dk.	,,	?	,,	Nil	R.	,,	,,	,,
82	85	76	42	105	,,	Med.	,,	Grey	,,	Sc.	W.	,,	,,	,,
85	69	78	46	109	,,	,,	,,	Dk. br.	,,	Mod.	L.O.	,,	,,	,,
96	85	81	46	106	Rosy br.	Dk.	,,	Blk.	,,	Nil	Ob.	,,	Conc.	,,
89	84	70	44	105	Rosy	,,	,,	Dk. br.	,,	Sc.	S.O.	,,	St.	Headman.
91	86	75	48	110	Rosy br.	,,	,,	?	,,	Sc.	W.	,,	Sin.	Herdsman.
86	70	72	42	109	,,	,,	,,	Blk.	,,	,,	,,	,,	Conc.	,,
87	90	85	49	101	,,	,,	,,	Dk. br.	,,	,,	L.O.	,,	?	,,
87	87	66	35	103	Rosy	Med.	,,	Blk.	,,	Nil	R.	,,	Sin.	,,
93	72	70	41	102	Rosy br.	,,	,,	,,	,,	Sc.	W.	,,	St.	,,
83	80	85	39	105	Rosy	Dk.	,,	Dk. br.	,,	Mod.	L.O.	,,	,,	,,
87	85	73	47	102	,,	Med.	,,	,,	,,	,,	W.	,,	,,	,,
83	79	89	53	102	,,	,,	,,	,,	,,	Ab.	L.O.	,,	,,	,,
88	89	72	42	105	,,	,,	,,	,,	,,	Sc.	R.	,,	Aq.	,,
83	88	73	37	103	,,	,,	,,	,,	,,	,,	,,	,,	Conc.	,,
88	77	86	48	102	,,	,,	,,	Blk.	,,	,,	L.O.	,,	Sin.	,,
85	71	77	48	105	,,	,,	,,	,,	,,	Nil	W.	,,	St.	,,
92	78	83	50	99	,,	,,	,,	,,	,,	Sc.	S.O.	,,	,,	,,

446. Head shaved ; no beard or moustache.
447. No teeth ; Mongolian eyes.
449. Mongolian eyes.
452. Mongolian eyes.
453. Grey-haired ; nose broken.
455. Mongolian eyes.
459. Seems to have Sart blood.
461. Mongolian eyes.
462. Mongolian eyes.
463. Mongolian eyes and type.
464. Mongolian eyes.

TABLE 2

Tribe.	No.	Head Length. M.	EM.	σ.	Eσ.	C.	EC.	Head Breadth. M.	EM.	σ.	Eσ.	C.	EC.	Cephalic Index. M.	EM.	σ.	Eσ.
1. Kafir ..	18	190·72	·87	5·48	·62	2·87	·32	146·61	1·13	7·10	·80	4·84	·54	76·88	·49	3·08	·35
2. Chitrali ..	22	186·64	·92	6·42	·65	3·51	·36	149·64	·91	6·33	·64	4·23	·43	80·26	·60	4·20	·43
3. Mastuji ..	28	185·64	·83	6·50	·59	3·50	·32	149·39	·75	5·89	·53	3·88	·35	80·57	·43	3·39	·31
4. Sarikoli ..	40	183·23	·52	4·85	·37	2·65	·20	149·95	·79	7·44	·56	4·96	·37	81·88	·46	4·32	·33
5. Bagh-jigda ..	12	184·42	1·24	6·38	·88	3·46	·48	146·67	·88	4·50	·62	3·07	·42	79·62	·68	3·50	·48
6. Pakhpu ..	25	186·88	·75	5·72	·53	3·06	·29	148·56	·49	3·60	·34	2·42	·23	79·88	·37	2·75	·26
7. Nissa ..	9	189·56	1·04	4·62	·73	2·44	·39	148·78	·72	3·22	·51	2·16	·34	78·44	·37	1·64	·26
8. Kōk-yar ..	37	179·19	·63	5·69	·45	3·18	·25	153·22	·67	6·08	·48	3·97	·31	85·44	·39	3·56	·28
9. Karanghu-tagh	21	191·67	1·07	8·72	·91	4·55	·47	149·00	·59	4·02	·42	2·70	·28	77·85	·54	3·69	·38
10. Korla.. ..	14	184·21	·91	5·06	·65	2·74	·35	158·21	·65	3·61	·46	2·28	·29	85·96	·60	3·31	·42
11. Wakhi ..	19	184·74	·95	6·15	·67	3·33	·36	155·68	·91	5·44	·60	3·49	·38	84·81	·60	3·90	·43
12. Turfan ..	72	183·64	·41	5·13	·29	2·79	·16	156·15	·44	5·50	·31	3·52	·20	85·07	·31	3·92	·22
13. Khotan ..	67	182·50	·52	6·24	·37	3·42	·20	153·47	·45	5·41	·32	3·53	·21	84·21	·36	4·38	·26
14. Hami.. ..	21	187·70	·72	4·80	·51	2·56	·38	152·85	·88	5·84	·62	3·82	·41	85·01	·68	4·51	·48
15. Charkhlik ..	12	190·67	1·78	9·11	1·25	4·78	·66	154·08	1·05	5·39	·74	3·50	·48	81·42	·87	4·46	·61
16. Loplik ..	38	193·97	·74	6·78	·52	3·50	·27	151·11	·55	5·00	·39	3·31	·26	77·92	·32	2·91	·23
17. Chinese ..	20	192·45	·78	5·18	·55	2·17	·23	145·55	·57	3·77	·40	2·59	·28	76·54	·36	2·38	·25
18. Keriya ..	21	179·95	1·07	7·25	·75	4·03	·42	154·81	·88	5·97	·62	3·86	·40	86·13	·65	4·58	·46
19. Niya	18	178·44	·79	4·96	·56	2·78	·31	153·83	·94	5·90	·66	3·84	·43	86·30	·61	3·86	·43
20. Polur.. ..	31	185·45	·83	6·83	·59	3·14	·28	150·00	·64	5·25	·45	3·50	·30	81·02	·54	4·43	·38
21. Ak-su.. ..	13	173·92	1·35	7·25	·96	4·17	·55	155·00	1·24	6·62	·88	4·27	·56	89·20	·68	3·65	·48
22. Faizabad ..	12	181·92	1·23	6·30	·87	3·46	·48	155·08	·85	4·25	·60	2·81	·39	85·37	·80	4·12	·57
23. Kelpin ..	15	180·47	1·32	7·58	·93	4·20	·52	156·33	1·06	6·10	·75	3·90	·48	86·73	·72	4·13	·51
24. Dolan ..	16	182·20	1·12	6·24	·79	3·52	·44	156·47	·91	5·23	·64	3·34	·41	85·39	·84	4·83	·59
25. Kirghiz ..	38	180·50	·70	6·48	·50	3·59	·28	160·84	·42	3·86	·30	2·40	·19	88·18	·39	3·59	·28

TABLE 3

Tribe.	No.	Nose Length. M.	EM.	σ.	Eσ.	C.	EC.	Nose Breadth. M.	EM.	σ.	Eσ.	C.	EC.	Nasal Index. M.	EM.	σ.	Eσ.
1. Kafir ..	18	46·17	·59	3·94	·41	8·5	·9	32·94	·48	3·05	·34	9·3	·9	72·06	1·34	10·38	·94
2. Chitrali ..	22	50·55	·53	2·74	·38	5·4	·8	32·36	·43	2·52	·30	7·8	·8	64·27	1·21	6·78	·85
3. Mastuji ..	28	46·79	·47	4·62	·33	9·9	·7	33·61	·38	3·12	·27	9·3	·7	72·54	1·07	9·10	·76
4. Sarikoli ..	40	47·60	·39	3·67	·28	7·7	·6	34·02	·32	3·04	·23	8·9	·6	71·95	·90	8·70	·63
5. Bagh-jigda ..	12	45·42	·72	2·68	·51	5·9	1·1	34·92	·61	3·11	·41	8·9	1·1	77·25	1·63	7·40	1·16
6. Pakhpu ..	25	48·68	·50	3·78	·35	7·8	·7	35·68	·40	2·40	·29	6·7	·8	73·80	1·13	7·82	·80
7. Nissa ..	9	50·00	·83	4·61	·59	9·2	1·2	37·00	·67	2·69	·48	7·3	1·3	74·67	1·89	7·02	1·34
8. Kōk-yar ..	37	50·59	·41	3·53	·29	7·0	·6	36·73	·33	2·59	·23	7·1	·6	73·00	·93	6·81	·66
9. Karanghu-tagh	21	51·43	·54	4·28	·38	8·3	·8	36·76	·44	3·07	·31	8·3	·9	71·95	1·24	11·10	·87
10. Korla.. ..	14	47·71	·67	4·10	·47	8·6	1·0	37·50	·54	2·30	·38	6·1	1·0	78·00	1·51	10·00	1·07
11. Wakhi ..	19	50·42	·57	2·74	·40	5·4	·8	35·84	·46	3·22	·33	9·0	·9	71·32	1·30	7·44	·92
12. Turfan ..	72	47·43	·29	2·99	·21	8·1	·4	36·99	·24	3·31	·17	7·0	·5	78·29	·67	7·84	·47
13. Khotan ..	67	49·91	·31	3·81	·22	7·6	·4	36·89	·25	3·08	·18	8·4	·5	74·70	·64	7·83	·46
14. Hami.. ..	21	48·48	·54	2·99	·38	6·2	·8	37·81	·44	2·26	·31	6·0	·9	78·90	1·24	6·22	·87
15. Charkhlik ..	12	47·92	·72	4·14	·51	8·5	1·1	37·92	·58	4·14	·41	10·9	1·1	79·42	1·63	7·55	1·16
16. Loplik ..	38	47·11	·40	4·18	·29	8·9	·6	35·45	·33	3·03	·23	8·5	·6	75·76	·92	9·84	·65
17. Chinese ..	20	45·20	·56	4·08	·39	9·0	·8	35·10	·45	4·62	·32	13·1	·9	78·20	1·27	12·18	·90
18. Keriya ..	21	45·71	·43	2·92	·30	6·4	·7	37·00	·39	2·62	·27	7·1	·7	81·24	·98	6·64	·69
19. Niya	18	45·72	·59	3·84	·41	8·4	·9	37·39	·48	2·38	·34	6·4	·9	82·28	1·34	8·06	·91
20. Polur.. ..	31	49·90	·45	4·31	·32	8·6	·7	36·45	·37	3·53	·26	9·7	·7	73·39	1·03	7·72	·73
21. Ak-su.. ..	13	52·85	·69	4·79	·49	9·1	1·0	36·54	·56	3·68	·40	10·1	1·1	70·23	1·57	12·68	1·11
22. Faizabad ..	12	53·67	·72	4·28	·51	8·0	1·1	36·17	·58	3·22	·41	8·9	1·1	67·83	1·63	7·79	1·16
23. Kelpin ..	15	48·60	·64	3·25	·45	6·7	·9	38·67	·52	3·01	·37	7·8	1·0	79·67	1·46	7·98	1·03
24. Dolan ..	16	51·19	·62	3·23	·44	6·3	·9	39·94	·51	3·14	·36	7·9	1·0	78·19	1·42	5·18	1·00
25. Kirghiz ..	38	49·26	·40	4·56	·29	9·3	·6	38·21	·33	3·40	·23	8·9	·6	78·13	·92	8·22	·65

TABLE 4

Tribe.	No.	Face Length.						Face Breadth.						Facial Index.			
		M.	EM.	σ.	Eσ.	C.	EC.	M.	EM.	σ.	Eσ.	C.	EC.	M.	EM.	σ.	Eσ.
1. Kafir ..	18	112·72	1·06	7·88	·75	7·1	·7	116·06	·92	6·04	·65	5·2	·5	97·17	·92	4·94	·65
2. Chitrali ..	22	116·92	·96	7·27	·68	6·2	·6	121·95	·84	6·47	·59	5·3	·5	96·23	·83	7·12	·59
3. Mastuji ..	28	112·04	·85	8·65	·60	7·7	·5	119·93	·74	7·65	·52	6·4	·4	93·25	·74	5·74	·52
4. Sarikoli ..	40	112·67	·71	6·58	·50	5·8	·4	125·75	·62	4·65	·44	3·7	·3	89·62	·62	5·01	·44
5. Bagh-jigda ..	12	112·33	1·30	8·06	·92	7·2	·8	124·58	1·13	4·92	·80	3·9	·6	90·42	1·12	6·03	·79
6. Pakhpu ..	25	114·60	·90	5·71	·64	5·0	·6	125·64	·78	3·68	·55	2·9	·4	91·28	·78	5·26	·55
7. Nissa ..	9	113·11	1·50	4·11	1·06	3·6	·9	129·78	1·31	6·45	·92	5·0	·7	87·33	1·30	5·45	·92
8. Kōk-yar ..	37	117·97	·74	5·61	·52	4·8	·5	129·38	·64	4·94	·46	3·8	·4	92·70	·64	5·22	·45
9. Karanghu-tagh	21	117·24	·98	6·89	·70	5·9	·6	131·20	·86	3·21	·61	2·4	·5	89·48	·85	5·66	·60
10. Korla	14	118·00	1·21	8·12	·85	6·9	·7	131·79	1·05	5·34	·74	4·1	·6	89·14	1·04	5·43	·74
11. Wakhi ..	19	115·00	1·04	5·24	·73	4·6	·6	128·00	·90	6·19	·64	4·8	·5	89·47	·89	5·98	·63
12. Turfan ..	72	117·93	·53	5·56	·38	4·7	·3	131·89	·46	4·90	·33	3·7	·3	89·47	·46	5·04	·32
13. Khotan ..	67	117·45	·51	6·20	·36	5·3	·3	136·00	·57	6·96	·41	5·1	·3	86·31	·53	6·48	·38
14. Hami	21	116·67	·98	5·51	·70	4·7	·6	127·62	·85	5·37	·61	4·2	·5	91·71	·85	6·08	·60
15. Charkhlik ..	12	115·75	1·30	10·45	·92	9·0	·8	134·25	1·13	6·89	·80	5·1	·6	86·25	1·12	4·82	·79
16. Loplik ..	38	111·13	·73	7·94	·52	7·1	·5	130·79	·64	5·82	·45	4·4	·3	85·00	·63	6·01	·45
17. Chinese ..	20	117·20	1·01	8·31	·71	7·1	·6	127·35	·88	5·77	·62	4·5	·5	92·70	·87	7·11	·62
18. Keriya ..	21	112·48	·90	6·10	·63	5·4	·6	134·43	·94	6·37	·66	4·7	·5	83·60	·78	5·46	·55
19. Niya	18	112·44	1·06	4·61	·75	4·1	·7	129·56	·92	5·84	·65	4·5	·5	87·05	·92	3·80	·65
20. Polur	31	115·45	·82	6·78	·58	5·9	·5	139·77	·72	4·74	·51	3·4	·4	83·58	·71	5·57	·50
21. Ak-su ..	13	111·69	1·25	8·26	·88	7·4	·8	139·08	1·08	5·95	·77	4·3	·6	80·62	1·08	6·00	·76
22. Faizabad ..	12	121·50	1·30	7·04	·92	5·8	·8	141·92	·13	5·16	·80	3·6	·6	85·67	1·12	5·38	·79
23. Kelpin ..	15	113·47	1·16	8·11	·82	7·1	·7	141·53	1·01	7·11	·72	5·0	·6	80·20	1·01	5·65	·71
24. Dolan ..	16	117·12	1·13	6·04	·80	6·9	·7	145·62	·98	5·82	·69	4·0	·5	80·50	·97	4·05	·69
25. Kirghiz ..	38	114·18	·73	7·38	·52	6·5	·5	145·00	·64	6·89	·45	4·8	·3	78·95	·63	6·38	·45

TABLE 5

Tribe.	No.	Upper Face Length.						Upper Facial Index.				Horizontal Circumference.					
		M.	EM.	σ.	Eσ.	C.	EC.	M.	EM.	σ.	Eσ.	M.	EM.	σ.	Eσ.	C.	EC
1. Kafir ..	18	63·89	·74	3·93	·52	6·2	·8	55·06	·63	3·43	·44	555·6	2·20	22·0	1·55	4·0	·3
2. Chitrali ..	22	67·64	·67	4·21	·48	6·2	·7	55·68	·57	4·11	·40	555·0	1·99	15·1	1·41	2·7	·3
3. Mastuji ..	28	65·54	·60	4·55	·42	6·9	·6	54·64	·50	3·80	·36	566·4	1·76	15·5	1·25	2·7	·2
4. Sarikoli ..	40	66·05	·50	5·32	·35	8·1	·5	52·45	·42	4·48	·30	543·0	1·48	12·4	1·04	2·3	·2
5. Bagh-jigda ..	12	66·17	·91	3·37	·64	5·1	1·1	53·17	·77	3·30	·54	542·7	2·69	14·6	1·90	2·7	·4
6. Pakhpu ..	25	66·80	·63	4·27	·45	6·4	·7	53·20	·53	3·73	·38	540·6	1·87	11·3	1·32	2·1	·3
7. Nissa ..	9	67·33	1·05	3·93	·74	5·8	1·1	52·11	·89	4·60	·63	552·8	3·11	12·8	2·20	2·3	·4
8. Kōk-yar ..	37	69·86	·52	3·66	·37	5·2	·6	54·08	·44	3·48	·31	537·4	1·53	16·9	1·08	3·2	·2
9. Karanghu-tagh	21	68·71	·69	4·85	·49	7·1	·7	52·62	·58	3·89	·41	553·6	2·04	13·9	1·44	2·5	·3
10. Korla	14	67·64	·84	5·28	·60	7·8	·9	51·14	·71	3·90	·50	554·3	2·50	8·4	1·76	1·5	·3
11. Wakhi ..	19	68·58	·72	5·02	·51	7·3	·8	53·68	·61	4·90	·43	551·8	2·14	16·0	1·51	2·9	·3
12. Turfan ..	72	67·35	·37	3·95	·26	5·9	·4	51·31	·31	3·48	·22	550·6	1·10	11·7	·78	2·1	·1
13. Khotan ..	44	66·86	·46	4·50	·33	6·7	·5	49·47	·44	4·28	·31	544·2	1·12	11·0	·79	2·0	·1
14. Hami	21	67·10	·69	4·09	·49	6·1	·7	52·57	·58	4·36	·41	553·6	2·04	8·4	1·44	1·5	·3
15. Charkhlik ..	12	69·83	·91	5·88	·64	8·4	1·0	52·00	·77	2·53	·54	569·2	2·70	14·1	1·90	2·5	·4
16. Loplik ..	38	68·87	·51	5·17	·36	7·5	·5	52·71	·43	3·98	·31	576·1	1·51	16·3	1·07	2·8	·2
17. Chinese ..	20	68·85	·70	5·54	·50	8·1	·7	54·45	·59	4·47	·42	575·5	2·09	18·3	1·47	3·2	·3
18. Keriya ..	5	64·00	·68	3·35	·48	5·2	1·1	49·20	·94	3·94	·67	546·2	4·10	13·6	2·95	2·6	·5
19. Niya	18	64·56	·74	4·44	·52	6·9	·8	49·22	·63	3·00	·44	542·2	2·20	18·0	1·55	3·3	·3
20. Polur	31	67·74	·58	4·19	·41	6·2	·6	48·68	·49	3·58	·34	550·5	1·70	14·7	1·20	2·7	·2
21. Ak-su	13	67·62	·87	4·33	·62	6·4	·9	48·69	·74	3·72	·52	547·3	2·59	13·4	1·83	2·5	·4
22. Faizabad ..	12	67·92	·91	6·71	·64	9·9	1·0	48·08	·77	5·35	·54	549·2	2·70	14·1	1·90	2·6	·4
23. Kelpin ..	15	65·93	·81	5·15	·58	7·8	·9	46·60	·69	3·49	·49	551·0	2·41	17·8	1·70	3·2	·3
24. Dolan ..	16	68·06	·79	5·73	·56	8·4	·8	45·87	·66	4·53	·47	557·0*	2·41	17·3	1·70	3·1	·3
25. Kirghiz ..	38	66·42	·51	5·19	·36	7·8	·5	45·87	·43	4·61	·30	566·5	1·51	12·8	1·07	2·3	·2

* 15 measures only.

TABLE 6.

Tribe.	o.	Stature. M.	EM.	σ.	Eσ.	C.	EC.	Span. M.	EM.	σ.	Eσ.	C.	EC.	Index. M.	EM.	σ.	Eσ.
1. Kafir ..	18	166·78	·90	6·33	·64	3·8	·4	170·78	1·00	7·00	·71	4·1	·4	102·56	·34	2·27	·24
2. Chitrali ..	22	168·45	·81	5·93	·58	3·5	·3	171·50	·90	7·17	·64	4·2	·4	101·82	·31	2·33	·22
3. Mastuji ..	28	166·61	·72	7·04	·51	4·2	·3	169·93	·80	7·29	·57	4·3	·3	102·00	·27	3·66	·19
4. Sarikoli ..	40	163·77	·60	4·43	·43	2·7	·3	166·40	·67	6·25	·47	3·8	·3	101·55	·23	1·42	·16
5. Bagh-jigda ..	12	164·75	1·10	7·32	·78	4·4	·5	168·33	1·22	5·94	·86	3·5	·3	103·25	·42	2·44	·29
6. Pakhpu ..	25	160·40	·76	4·95	·54	3·1	·3	162·60	·85	5·05	·60	3·1	·4	101·32	·29	1·80	·20
7. Nissa ..	9	160·22	1·27	4·95	·90	3·1	·5	159·56	1·41	5·43	1·00	3·4	·6	99·44	·48	1·47	·34
8. Kõk-yar ..	37	162·92	·63	5·89	·44	3·6	·3	166·30	·70	7·89	·49	4·8	·3	102·22	·24	2·35	·17
9. Karanghu-tagh	21	166·05	·83	5·29	·59	3·2	·4	166·10	·92	7·09	·65	4·3	·4	100·05	·31	2·04	·22
10. Korla.. ..	14	166·79	1·02	7·06	·72	4·2	·4	167·29	1·13	8·39	·80	5·0	·5	99·86	·39	2·40	·27
11. Wakhi ..	19	168·00	·88	6·18	·62	3·7	·4	170·16	·97	5·35	·69	3·1	·4	101·32	·33	1·87	·23
12. Turfan ..	72	166·26	·45	5·70	·32	3·4	·2	168·00	·50	6·58	·35	3·9	·2	100·99	·17	2·17	·12
13. Khotan ..	67	165·52	·46	5·55	·32	3·4	·2	167·81*	·68	6·59	·48	3·9	·3	101·05*	·25	2·47	·18
14. Hami.. ..	21	163·00	·83	4·95	·59	3·0	·4	164·57	·92	6·61	·56	4·0	·4	100·95	·31	2·11	·22
15. Charkhlik ..	12	167·83	1·10	7·46	·78	4·4	·5	170·75	1·22	8·69	·86	5·1	·5	101·83	·42	1·93	·29
16. Loplik ..	38	169·50	·62	7·03	·44	4·1	·3	170·89	·69	6·81	·49	4·0	·3	100·82	·23	1·28	·17
17. Chinese ..	20	166·70	·85	5·17	·60	3·1	·4	166·95	·95	5·02	·67	3·0	·4	100·20	·32	2·21	·23
18. Keriya ..	21	161·25	·93	6·29	·65	3·9	·3	167·20†	1·07	3·54	·76	2·1	·4	99·40†	·59	1·96	·42
19. Niya	18	162·50	·90	5·04	·64	3·1	·4	164·94	1·00	5·61	·71	3·4	·4	101·50	·34	2·37	·24
20. Polur.. ..	31	164·42	·70	5·83	·49	3·5	·3	164·39	·77	6·15	·35	3·7	·3	99·87	·26	1·55	·19
21. Ak-su.. ..	13	163·77	1·06	5·85	·75	3·6	·5	169·15	1·17	5·07	·83	3·0	·5	103·31	·40	2·18	·28
22. Faizabad ..	12	166·92	1·10	4·92	·78	3·0	·5	173·25	1·22	5·22	·86	3·0	·5	103·83	·42	2·29	·29
23. Kelpin ..	15	165·00	·98	4·46	·70	2·7	·4	171·47	1·09	5·14	·77	3·0	·5	104·07	·37	1·89	·26
24. Dolan ..	16	164·12	·95	4·61	·67	2·8	·4	170·20‡	1·09	5·89	·77	3·5	·4	103·20‡	·35	1·66	·26
25. Kirghiz ..	38	164·08	·62	6·46	·44	3·9	·3	170·34	·69	7·52	·49	4·4	·3	103·63	·23	2·40	·17

* 43 measures only. † 5 measures only. ‡ 15 measures only.

TABLE 7

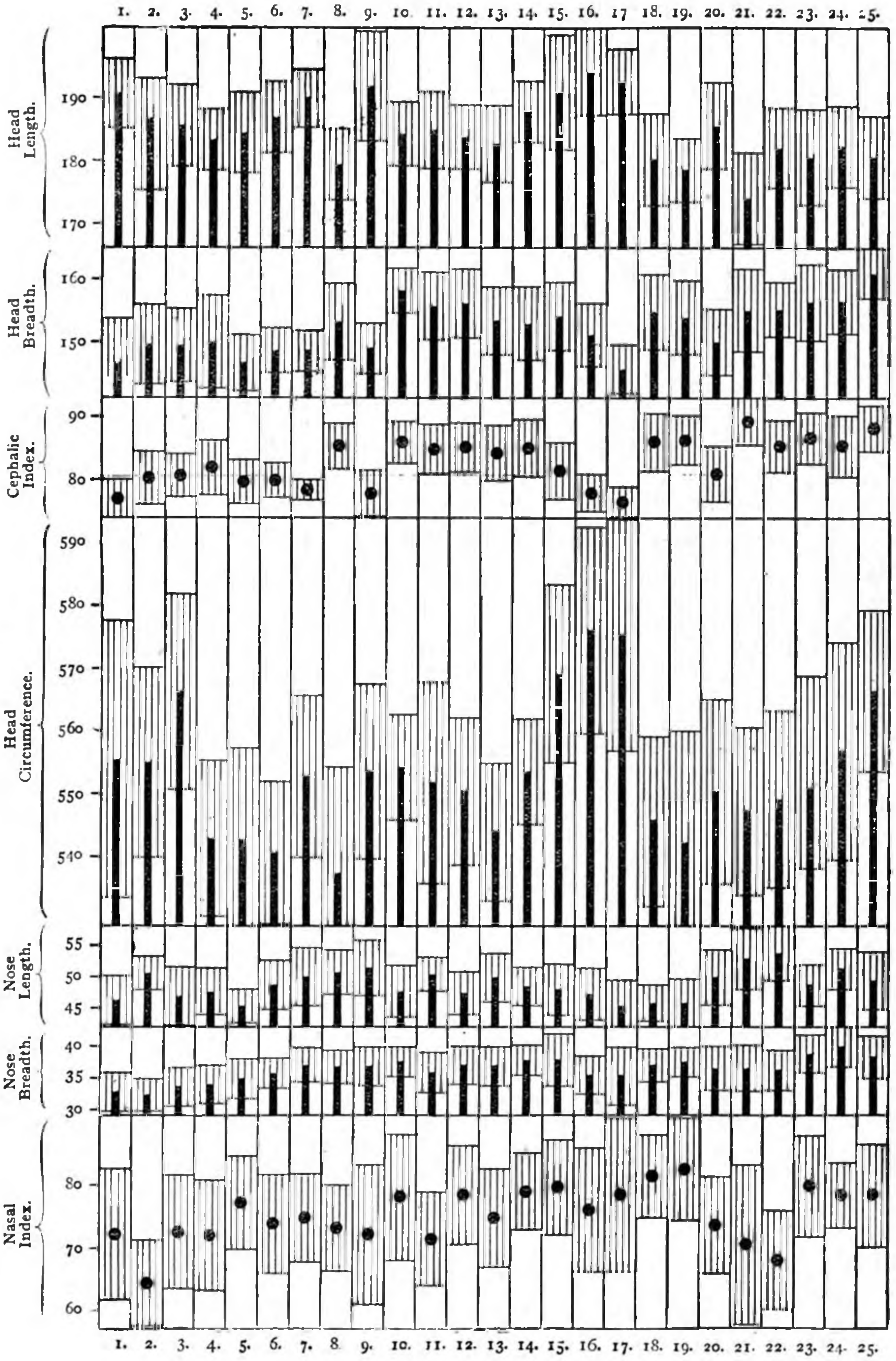
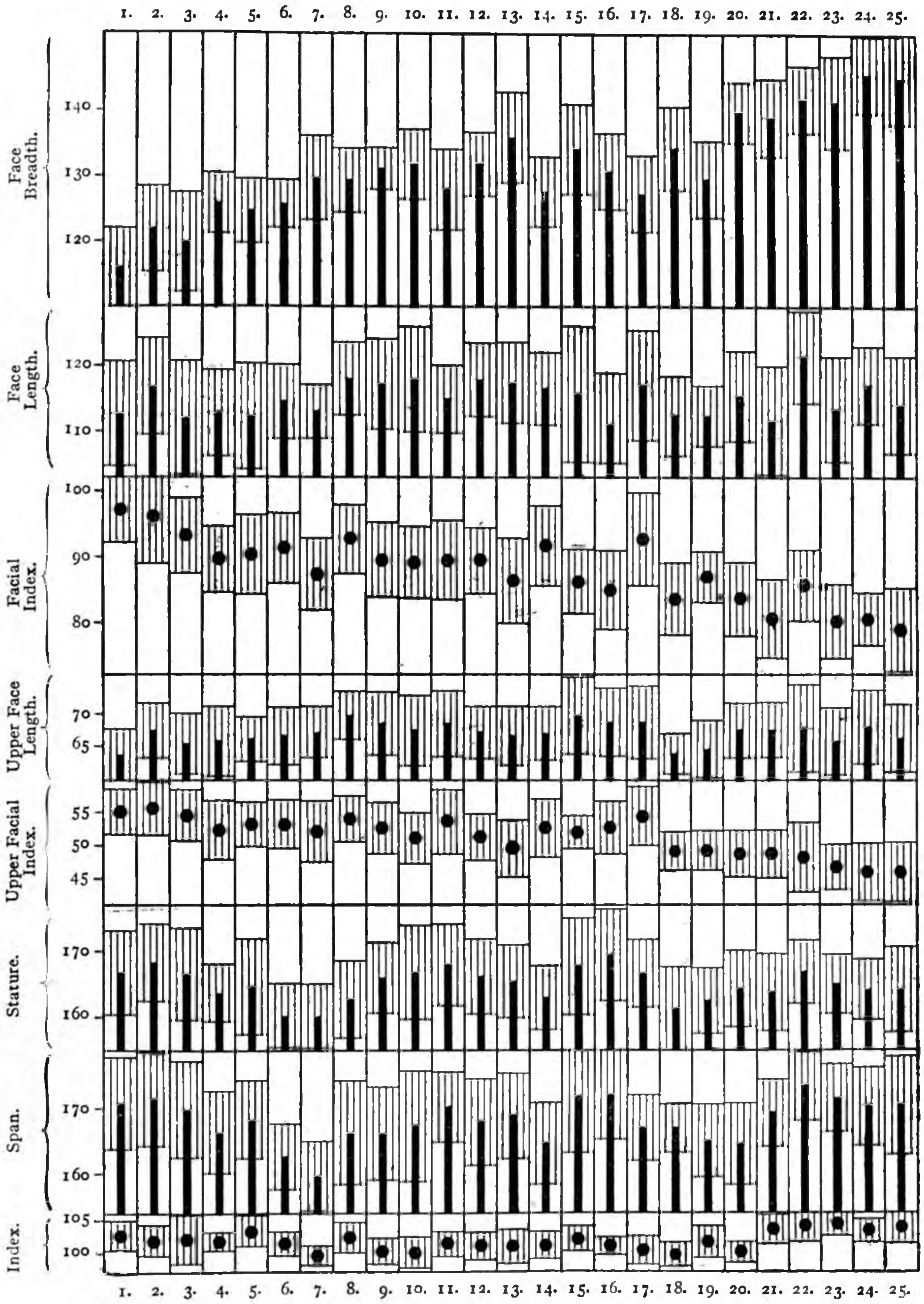

Head Length.
190
180
170
Head Breadth.
160
150
Cephalic Index.
90
80
Head Circumference.
590
580
570
560
550
540
Nose Length.
55
50
45
Nose Breadth.
40
35
30
Nasal Index.
80
70
60
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25.

TABLE 8



1. Kafir.
2. Chitrali.
3. Mastuji.
4. Sarikoli.
5. Bagh-jigda.
6. Pakhpu.
7. Nissa.
8. Kök-yar.
9. Karanghu-tagh.
10. Korla.
11. Wakhi.
12. Turfan.
13. Khotan.
14. Hami.
15. Charkhlik.
16. Loplik.
17. Chinese.
18. Keriya.
19. Niya.
20. Polur.
21. Ak-su.
22. Faizabad.
23. Kelpin.
24. Dolan.
25. Kirghiz.

TABLE 9

	Kafir.	Chitrali.	Mastuji.	Sarikoli.	Bagh-jigda.	Pakhpu.	Nissa.	Kök-yar.	Karanghu-tagh.	Korla.	Wakhi.	Turfan.	Khotan.	Hami.	Charkhlik.	Loplik.	Chinese.	Keriya.	Niya	Polur.	Ak-su.	Faizabad.	Kelpin.	Dolan.
Chitrali ..	5·92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mastuji ..	4·18	4·84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sarikoli.. ..	7·91	6·75	4·71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bagh-jigda ..	6·48	8·44	5·94	3·66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pakhpu.. ..	9·42	8·11	6·27	4·10	4·78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nissa	10·49	11·73	7·31	6·70	9·13	5·36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kök-yar ..	11·82	8·21	8·03	5·63	8·28	6·58	9·27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Karanghu-tagh	8·72	7·13	7·43	6·93	8·51	5·47	4·61	6·02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Korla	12·55	10·99	8·67	7·19	8·86	8·52	8·48	6·76	7·02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wakhi	8·99	6·76	5·76	6·31	7·62	6·39	8·57	5·00	5·51	4·50	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Turfan	9·98	10·11	6·64	5·93	6·90	7·45	8·30	6·28	6·14	2·03	3·94	—	—	—	—	—	—	—	—	—	—	—	—	—
Khotan.. ..	12·39	9·19	8·47	5·80	7·28	6·96	7·32	4·91	5·77	4·62	4·80	2·98	—	—	—	—	—	—	—	—	—	—	—	—
Hami	9·34	8·68	6·34	5·46	6·98	4·55	5·68	6·04	4·93	4·61	5·57	4·71	6·62	—	—	—	—	—	—	—	—	—	—	—
Charkhlik ..	9·79	8·69	7·08	6·12	7·54	8·30	7·89	7·95	6·33	5·97	5·82	5·71	5·78	4·92	—	—	—	—	—	—	—	—	—	—
Loplik	8·71	8·97	6·59	8·42	7·52	10·30	7·01	10·69	5·54	9·27	7·72	7·92	8·21	6·96	4·30	—	—	—	—	—	—	—	—	—
Chinese ..	6·32	8·17	6·47	8·22	6·44	7·64	8·44	9·91	4·84	10·66	8·63	9·30	9·90	6·73	6·77	5·20	—	—	—	—	—	—	—	—
Keriya	12·85	14·88	10·55	8·55	8·67	9·77	8·59	8·67	9·43	6·31	7·21	5·48	5·72	8·42	8·28	10·54	11·73	—	—	—	—	—	—	—
Niya	13·67	13·50	10·02	6·63	7·80	9·06	9·71	6·88	9·82	6·92	8·22	5·85	6·04	7·90	8·11	9·09	12·34	3·64	—	—	—	—	—	—
Polur	11·97	9·92	8·44	6·71	8·55	5·87	5·79	8·12	7·15	6·76	6·50	6·28	4·06	6·77	7·53	8·24	9·29	7·10	8·30	—	—	—	—	—
Ak-su	13·95	12·11	11·77	9·29	10·65	11·76	11·88	8·05	10·50	8·42	7·82	7·66	6·20	10·50	9·25	12·00	15·25	6·84	6·35	6·46	—	—	—	—
Faizabad ..	14·58	11·03	11·62	9·89	11·83	12·19	13·19	8·95	10·57	7·96	7·53	7·24	6·59	11·48	8·24	11·32	13·30	10·07	10·09	7·32	6·73	—	—	—
Kelpin	14·65	13·81	11·64	10·12	10·68	12·60	13·18	10·15	11·63	7·40	8·71	6·89	6·51	10·22	8·16	10·76	14·60	6·82	13·18	7·68	5·05	7·16	—	—
Dolan	16·28	13·24	11·62	11·82	12·00	13·17	13·11	9·52	10·91	7·15	8·86	7·44	7·77	10·62	8·04	11·16	14·24	9·01	9·99	7·83	5·57	6·99	3·41	—
Kirghiz.. ..	15·72	15·22	12·39	11·34	12·39	13·42	14·81	11·94	13·39	8·49	9·89	8·72	9·13	10·89	8·93	12·08	15·46	8·75	9·76	10·80	6·20	8·80	2·84	3·35

TABLE 10

Tribe.	ΣΔ under 3.	ΣΔ under 4.	ΣΔ under 5.	ΣΔ under 6.
Kafir	.. ..	.. ..	Mastuji	*Chitrali.*
Chitrali	.. ..	.. ..	Mastuji	*Kafir.*
Mastuji	.. ..	.. ..	Kafir, Chitrali, Sarikoli	Wakhi, Bagh-jigda.
Sarikoli	.. ..	Bagh-jigda	Mastuji, Pakhpu	Turfan, Kök-yar, *Khotan, Hami.*
Bagh-jigda	.. ..	Sarikoli	Pakhpu	Mastuji.
Pakhpu	.. ..	.. ..	Sarikoli, Bagh-jigda, Hami	*Karanghu-tagh, Nissa, Polu.*
Nissa	.. ..	.. ..	Karanghu-tagh	Hami, *Pakhpu, Polu.*
Kök-yar	.. ..	.. ..	Khotan	Sarikoli, Wakhi.
Karanghu-tagh	.. ..	.. ..	Nissa, Hami, *Chinese*	Loplik, *Pakhpu, Wakhi, Khotan.*
Korla	Turfan	.. ..	Wakhi, Khotan, Hami	Charkhlik.
Wakhi	.. ..	Turfan	Khotan, Korla	Mastuji, Charkhlik, Hami. Kök-yar, *Karanghu-tagh.*
Turfan	Khotan, Korla	Wakhi	Hami	Sarikoli, Charkhlik, Keriya, *Niya.*
Khotan	Turfan	.. ..	Wakhi, Polur, Kök-yar, Korla	Charkhlik, Keriya, *Sarikoli, Karanghu-tagh*
Hami	.. ..	.. ..	Pakhpu, Karanghu-tagh; Turfan, Charkhlik, Korla	Nissa, Wakhi, *Sarikoli.*
Charkhlik	.. ..	.. ..	Loplik, Hami	Wakhi, Turfan, Khotan, Korla.
Loplik	.. ..	.. ..	Charkhlik	Karanghu-tagh, Chinese.
Chinese	.. ..	.. ..	*Karanghu-tagh*	Loplik.
Keriya	.. ..	Niya	.. ..	Turfan, Khotan.
Niya	.. ..	Keriya	.. ..	*Turfan.*
Polur	.. ..	.. ..	Khotan	*Pakhpu, Nissa.*
Ak-su	.. ..	.. ..	.. ..	Kelpin, Dolan.
Faizabad				
Kelpin	Kirghiz	Dolan	.. ..	Ak-su.
Dolan	.. ..	Kelpin, Kirghiz	.. ..	Ak-su.
Kirghiz	Kelpin	Dolan		

TABLE 11

Tribe.	ΣΔ over 15.	ΣΔ over 14.	ΣΔ over 13.	ΣΔ over 12.	ΣΔ over 11.	ΣΔ over 10.	ΣΔ over 9.
Kafir	Dolan, Kirghiz	Faizabad, Kelpin	Niya, Ak-su	Khotan, Keriya, Korla	Polur, Kökyar	Nissa	Pakhpu, Turfan, Charkhlik, Hami.
Chitrali	Kirghiz	Keriya	Niya, Kelpin, Dolan	Ak-su	Nissa, Faizabad	Turfan, Korla	Polu, Khotan.
Mastuji	.. ..	.. ..	.. ..	Kirghiz	Faizabad, Ak-su, Kelpin, Dolan	Niya, Keriya	.. ..
Sarikoli	.. ..	.. ..	.. ..	.. ..	Kirghiz, Dolan	Kelpin	Faizabad, Ak-su.
Bagh-jigda	.. ..	.. ..	.. ..	Kirghiz, Dolan	Faizabad	Ak-su, Kelpin	Nissa.
Pakhpu	.. ..	.. ..	Kirghiz, Dolan	Faizabad, Kelpin	Ak-su	Loplik	Kafir, Keriya, Niya.
Nissa	.. ..	Kirghiz	Faizabad, Kelpin, Dolan	.. ..	Chitrali, Ak-su	Kafir	Bagh-jigda, Kök-yar, Niya.
Kök-yar	.. ..	.. ..	.. ..		Kafir, Kirghiz	Loplik, Kelpin	Chinese, Nissa, Dolan.
Karanghu-tagh	.. ..	.. ..	Kirghiz	.. ..	Kelpin	Faizabad, Ak-su, Dolan	Keriya, Niya.
Korla	.. ..	.. ..	.. ..	Kafir	.. ..	Chitrali, Chinese	Loplik.
Wakhi	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	Kirghiz.
Turfan	.. ..	.. ..	.. ..	.. ..	.. ..	Chitrali	Kafir, Chinese.
Khotan	.. ..	.. ..	.. ..	Kafir	.. ..	.. ..	Chitrali, Chinese, Kirghiz.
Hami	.. ..	.. ..	.. ..	.. ..	Faizabad	Ak-su, Kirghiz, Kelpin, Dolan	Kafir.
Charkhlik	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	Kafir, Ak-su.
Loplik	.. ..	.. ..	.. ..	Ak-su, Kirghiz	Faizabad, Dolan	Pakhpu, Kök-yar, Kelpin, Keriya	Korla, Niya.
Chinese	Kirghiz, Ak-su	Kelpin, Dolan	Faizabad	Niya	Keriya	Korla	Turfan, Polur, Khotan, Kök-yar.
Keriya	.. ..	Chitrali	.. ..	Kafir	Chinese	Mastuji, Loplik, Faizabad	Karanghu-tagh, Dolan, Pakhpu.
Niya	.. ..	.. ..	Kafir, Chitrali	Chinese	.. ..	Mastuji, Faizabad	Pakhpu, Loplik, Kirghiz, Nissa, Karanghu-tagh, Dolan.
Polur	.. ..	.. ..	.. ..	.. ..	Kafir	Kirghiz	Chitrali, Chinese.
Ak-su	Chinese	.. ..	Kafir	Chitrali, Loplik	Mastuji, Pakhpu, Nissa	Karanghu-tagh, Bagh-jigda, Hami	Sarikoli, Charkhlik.
Faizabad	.. ..	Kafir	Chinese, Nissa	Pakhpu	Chitrali, Bagh-jigda, Mastuji, Loplik, Hami	Karanghu-tagh, Niya, Keriya	Sarikoli.
Kelpin	.. ..	Kafir, Chinese	Chitrali, Nissa	Pakhpu	Mastuji, Karanghu-tagh	Sarikoli, Bagh-jigda, Loplik, Hami, Kök-yar	.. ..
Dolan	Kafir	Chinese	Chitrali, Pakhpu, Nissa	Bagh-jigda	Sarikoli, Mastuji, Loplik	Karanghu-tagh, Hami	Kök-yar, Niya, Keriya.
Kirghiz	Kafir, Chitrali, Chinese	Nissa	Pakhpu, Karanghu-tagh	Mastuji, Loplik, Bagh-jigda	Sarikoli, Kök-yar	Polur, Hami	Wakhi, Khotan, Niya.

TABLE 12

	Skin-colour. Per cent.					
	Brown.	Rosy-Brown.	Rosy.	Rosy-Yellow.	Yellow.	Brown-Yellow.
Kafir	22	—	78	—	—	—
Chitrali	—	—	100	—	—	—
Mastuji	4	—	93	—	—	4
Sarikoli	—	—	100	—	—	—
Bagh-jigda	—	—	100	—	—	—
Pakhpu	—	—	100	—	—	—
Nissa	—	—	100	—	—	—
Kök-yar	—	8	92	—	—	—
Karanghu-tagh	8	—	92	—	—	—
Korla	—	23	54	15	8	—
Wakhi	—	—	95	—	—	5
Turfan	—	14	73	11	2	—
Khotan	—	3	94	3	—	—
Hami	—	13	80	7	—	—
Charkhlik	—	—	100	—	—	—
Loplik	—	—	97	3	—	—
Chinese	—	—	35	—	65	—
Keriya	—	5	95	—	—	—
Niya	—	—	100	—	—	—
Polur	—	23	74	3	—	—
Ak-su	—	23	62	15	—	—
Faizabad	—	25	75	—	—	—
Kelpin	—	26	67	7	—	—
Dolan	—	75	25	—	—	—
Kirghiz	—	42	58	—	—	—

TABLE 13

	Hair-colour. Per cent.			Hair-quality. Per cent.			Hair-amount. Per cent.	
	Black.	Dark-Brown.	Fair and Medium.	Straight.	Wavy.	Curly.	Abundant, Moderate.	Scanty, Nil.
Kafir	17	56	28	28	—	72	100	—
Chitrali ..	5	91	5	—	—	100	100	—
Mastuji ..	14	82	4	—	—	100	100	—
Sarikoli ..	18	53	30	—	—	100	100	—
Bagh-jigda ..	25	75	—	—	—	100	100	—
Pakhpu ..	—	68	32	—	—	100	92	8
Nissa	44	33	22	—	—	100	100	—
Kök-yar ..	35	38	26	—	—	100	69	31
Karanghu-tagh	—	69	31	—	—	100	100	—
Korla	46	46	8	—	—	100	77	23
Wakhi ..	5	63	32	—	—	100	100	—
Turfan ..	25	70	5	—	—	100	46	54
Khotan ..	24	56	20	2	—	98	94	6
Hami	20	73	7	—	—	100	53	47
Charkhlik ..	27	73	—	—	—	100	33	67
Loplik.. ..	40	34	26	—	—	100	37	63
Chinese ..	75	20	5	95	—	5	30	70
Keriya ..	33	57	10	—	10	90	62	38
Niya	12	41	47	—	—	100	94	6
Polur	32	55	13	—	—	100	81	19
Ak-su	31	54	16	—	100	—	54	46
Faizabad ..	10	72	19	—	83	17	92	8
Kelpin ..	47	40	13	—	100	—	86	14
Dolan	44	44	13	—	100	—	75	25
Kirghiz ..	50	47	3	—	100	—	29	71

TABLE 14

Eyes. Per cent.

	Dark.	Medium.	Light.	Fold.	Fold (trace).
Kafir	11	61	28	—	—
Chitrali	—	91	9	—	—
Mastuji	14	79	7	—	—
Sarikoli	3	70	28	—	—
Bagh-jigda	—	92	8	—	—
Pakhpu	4	68	28	—	—
Nissa	78	11	11	—	—
Kök-yar	34	60	6	—	—
Karanghu-tagh	23	69	8	—	—
Korla	62	38	—	15	—
Wakhi	5	89	5	—	—
Turfan	67	28	5	19	—
Khotan	44	49	7	—	—
Hami	67	33	—	—	7
Charkhlik	50	50	—	—	—
Loplik	16	79	5	5	5
Chinese	45	40	15	44	—
Keriya	29	57	14	—	5
Niya	18	53	30	—	—
Polur	68	32	—	—	—
Ak-su	77	23	—	—	—
Faizabad	33	58	8	—	—
Kelpin	40	47	14	—	—
Dolan	44	56	—	—	—
Kirghiz	43	55	3	*	—

* 37 per cent. of the Kirghiz are described as having 'Mongolian eyes'.

TABLE 15

Tribe.	No.	HL.	σ.	HB.	σ.	CI.	σ.	NL.	σ.	NB.	σ.	NI.	σ.	St.	σ.
Galcha	58	185	6·34	158	5·99	86	4·11	52	3·69	—	—	—	—	167	5·77
Pathan	80	185	6·75	142	4·12	76	3·20	50	2·80	34	1·87	68	5·17	169	6·04
Biloch	60	179	7·36	144	4·67	80	4·51	49	2·73	34	2·25	69	4·85	166	5·05
Dard	44	190	6·77	145	5·14	75	3·00	53	3·56	34	3·31	64	7·05	164	8·08
Ladakhi	31	194	4·26	148	4·74	77	2·99	49	3·31	37	4·10	76	11·43	163	4·57
Tibetans	38	189	6·25	153	5·92	80	3·75	52	3·82	39	2·90	75	8·06	164	6·22

TABLE 16

	Galcha.*	Pathan.	Biloch.	Dard.	Ladakhi.	Tibetans.
Kafir	4·97	3·19	3·61	3·10	2·71	4·78
Chitrali	2·31	3·56	3·63	2·91	4·86	3·67
Mastuji	3·07	3·60	2·40	3·97	3·63	3·53
Sarikoli	2·95	3·85	2·23	4·36	4·31	3·68
Bagh-jigda	4·50	4·27	3·25	5·34	3·70	3·99
Pakhpu	4·18	5·26	3·80	4·66	2·69	2·76
Nissa	4·87	4·68	4·88	3·46	2·17	2·28
Kök-yar	2·12	6·24	4·33	6·17	5·00	3·24
Karanghu-tagh	3·55	3·86	3·76	2·90	1·65	2·38
Korla	0·79	7·23	6·43	8·55	6·38	4·02
Wakhi	0·98	4·76	4·37	5·88	5·74	3·78
Turfan	2·71	6·91	5·19	7·35	5·14	4·02
Khotan	1·71	5·55	4·20	7·07	4·19	2·48
Hami	3·13	6·74	5·84	6·03	3·11	2·37
Charkhlik	2·66	5·78	4·93	6·04	3·09	2·10
Loplik	3·14	4·59	4·88	4·90	2·27	3·68
Chinese	5·91	3·77	4·49	4·01	2·44	4·67
Keriya	2·74	8·54	6·35	8·90	5·62	4·78
Niya	3·58	9·19	6·35	9·11	6·44	5·76
Polur	2·54	3·82	3·02	4·01	2·77	2·02
Ak-su	2·58	7·34	5·11	6·72	6·94	4·42
Faizabad	1·26	5·85	4·75	5·40	6·24	4·09
Kelpin	1·77	7·98	5·38	8·19	5·57	3·58
Dolan	1·83	7·64	6·33	7·02	5·13	3·74
Kirghiz	2·11	8·77	6·54	8·90	6·48	4·63
Pathan	4·94	—	1·87	1·87	4·59	5·15
Biloch	4·24	1·87	—	3·70	4·45	3·57
Dard	4·68	1·87	3·70	—	3·61	4·37
Ladakhi	5·20	4·59	4·45	3·61	—	3·05
Tibetans	2·44	5·15	3·57	4·37	3·05	—

* ΣΔ compiled from 6Δ only.

TABLE 17

Tribe.	$\Sigma\Delta$ under 1.	$\Sigma\Delta$ under 1·50.	$\Sigma\Delta$ under 2.	$\Sigma\Delta$ under 2·50.
Galcha	Korla, Wakhi	Faizabad, Dolan	Khotan, Kelpin	Kök-yar, Kirghiz, *Chitrali, Tibetans.*

Tribe.	Over 5·50.	Over 5.	Over 4·50.
Galcha	Chinese	Ladakhi	Kafir, Bagh-jigda, Nissa, Dard, Pathan.

TABLE 18

Tribe.	$\Sigma\Delta$ under 2.	$\Sigma\Delta$ 2·50 and under.	$\Sigma\Delta$ 3 and under.	$\Sigma\Delta$ 3·50 and under.
Pathan	Biloch, Dard			Kafir.
Biloch	Pathan	Sarikoli, Mastuji		Polur, *Bagh-jigda.*
Dard	Pathan		Chitrali, Karanghu-tagh	*Kafir, Nissa.*
Ladakhi	Karanghu-tagh	Loplik, Chinese, Nissa	Kafir, Polur, Pakhpu	Charkhlik, Tibetans, *Hami.*
Tibetans		Karanghu-tagh, Charkhlik, Polur, Hami, Khotan, Nissa	Pakhpu	Ladakhi, *Kök-yar.*

TABLE 19

Tribe.	$\Sigma\Delta$ over 9.	$\Sigma\Delta$ 8 and over.	$\Sigma\Delta$ 7 and over.	$\Sigma\Delta$ 6 and over.
Pathan	Niya	Keriya, Kirghiz	Kelpin, Ak-su, Dolan, Korla	
Biloch				Kirghiz, Keriya, Korla, Niya, Dolan.
Dard	Niya	Korla, Kirghiz, Keriya, Kelpin	Turfan, Dolan, Khotan	Ak-su, Charkhlik, Hami, Kök-yar.
Ladakhi				Ak-su, Korla, Kirghiz, Faizabad, Niya.
Tibetans				(Niya 5·76.)

APPENDIX D

EXAMINATION OF CERTAIN SPECIMENS OF MURAL PAINTING AND PLASTER

FROM AK-TEREK, KARA-SAI, KHĀDALIK, MĪRĀN, 'MING-OI', AND TUN-HUANG

BY

SIR ARTHUR CHURCH

Two specimens from Mīrān, now numbered i and ii.

On a backing of loess strengthened by means of the leaves and stems of the common reed (*Phragmites communis*), there was spread, and that very skilfully, a thin flat coating of impure burnt gypsum which had been made into a cream with water. Over the whole of this nearly white ground a layer of a pale pinkish pigment had been distributed. The pink colour is due, not to any organic substance, but to ferric oxide (Fe_2O_3). There is a little calcium sulphate in this pink layer, but this has been derived from the wet plaster on which the pigment had been spread, and not, as I imagined at first, from an admixture of plaster of Paris with the pigment. Nor can I find definite evidence of the use of any organic binding material, such as gum or size, in the coloured layer. What organic matter is present in the painted plaster is probably derived from the reeds used in the backing, and is accidental.

Upon the uniform pink layer just described, designs were painted in these three colours—pale green, pale yellowish brown, and grey. The green colour is derived from malachite, a basic copper carbonate; the yellowish brown is due to an impure ochreous earth; the grey to carbon in the form of what may be called Chinese ink. As Chinese ink is composed of soot and size, it is quite possible that the other pigments may have once contained some size, so that the method of painting used at Mīrān would have resembled ordinary tempera, but the chemical evidence on this point is far from decisive. In any case this painted fragment differs from all European frescoes in that its ground was plaster of Paris, and the attachment of the pigments to the surface was not due to the production of a binding film of calcium carbonate.

One specimen from Khādalik, now numbered iii.

Upon a backing of a rather clayey loess admixed with fibre is a thin smooth layer of plaster of Paris, superficially tinted with a pinkish ferruginous pigment. The white layer dissolves in acids without effervescence, also in pure water: the solution is one of calcium sulphate. The painting has not been executed upon a ground of slaked lime and sand as in true fresco. The vegetable fibrous material here consists of the leaves and stems of the common reed. There is no distinct evidence of the use, as a binding material, of any gum or size. The backing contains a little sulphate of lime, but not enough to indicate an intentional addition of plaster—in fact, not more than would have penetrated the backing from the wet plaster laid thereon.

One specimen from Khādalik, now numbered iv (labelled 'found with Kha. i. frescoes, case 3').

This is modelled in loess with fibre, but has originally been coated with plaster of Paris.

One specimen from Khădalik, now numbered v (labelled 'plaster stucco', while No. iv is labelled 'fibre stucco').

This is plaster of Paris; and, though hard, does not contain, as some of the burnt plaster from Khotan did, any calcium oxysulphide produced by a reducing process from the sulphate.

One specimen from Khădalik, now numbered vi (labelled 'soft red').

This seems to be loess which has been slightly burnt.

One specimen from Kara-sai, now numbered vii (labelled 'plaster stucco').

An extremely hard specimen of plaster of Paris. It contains no calcium oxysulphide, while the percentage of water present is quite normal, namely 12·21 per cent. lost at 100° with a total percentage of 21·78. This specimen of hard stucco from Kara-sai presents some features of peculiar interest. It is difficult to explain how it has come to be so much harder than ordinary plaster casts of to-day. The analytical figures do not account for this phenomenon. I here compare the results of an examination of the Kara-sai plaster with the theoretical percentages of normal plaster of Paris:—

	Kara-sai.	*Gypsum.*
Lime (CaO)	32·16	32·56
Sulphur trioxide (SO_3)	45·25	46·50
Water (H_2O)	21·78	20·93
Silica, Iron oxide	0·71	

The only difference between these numbers lies in this, that there is a slight deficiency of sulphuric acid in the Kara-sai specimens, which therefore contain about one per cent. of lime-salts other than the sulphate. The traces of silica and iron oxide present are quite negligible. The only explanation which I can offer of the peculiar hardness of the Kara-sai plaster is that it has been gently burnt after having been fashioned into form. This burning must have been intentional, not accidental, for there is a coating of pure white plaster of Paris, quite soft, upon the grey surfaces of the little six-petalled flowers which decorate the specimen. I take it that the maker of the ornament, not being satisfied with the dull greyish hue of his work after burning, painted it over with a cream of pure plaster of Paris, in order to restore the whiteness of its aspect.

One specimen from Ak-terek, now numbered viii (labelled 'hard red [burnt?] stucco').

This specimen closely resembles a sound red terra-cotta. It is in reality a burnt clay, and contains practically no calcium sulphate and very little lime in any form, but much ferric oxide (Fe_2O_3).

One specimen from Ming-oi, now numbered ix (labelled 'fibre-stucco, unburnt').

This specimen contains no notable amount of calcium sulphate and no calcium oxysulphide; in fact there are little more than traces of sulphuric acid, but some calcium carbonate is present. This resembles some sorts of calcareous plaster more nearly than any other specimen of this series, but it contained much clayey loess.

One specimen from Ming-oi, now numbered x (labelled 'fibre-stucco, partially burnt').

Rather fine loess, partially burnt.

One specimen from Ming-oi, now numbered xi (labelled 'fibre-stucco, burnt hard').

This is essentially burnt loess. If the sulphuric acid in it is all present as calcium sulphate and the rest of the calcium be regarded as in the form of carbonate, then it contains:—

Calcium sulphate 1·83 per cent.
Calcium carbonate 0·62 per cent.

Part of the calcium carbonate occurs in the form of minute crystals.

One specimen of fibre-stucco from Tun-huang now numbered xii.

This is a clayey loess, commixed with animal hairs as well as with vegetable fibres.

APPENDIX E

ESSAYS ON THE BUDDHIST PAINTINGS FROM THE CAVES OF THE THOUSAND BUDDHAS TUN-HUANG

BY

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AND

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I

PRELIMINARY SCHEME FOR THE PUBLICATION PROPOSED

BY

RAPHAEL PETRUCCI,

as drawn up in his letter of November 16, 1911 (see above, p. 834)

Je viens vous exposer ici le résultat du travail que j'ai accompli et l'indication de ce qu'il y a à tirer des documents iconographiques de votre Mission. Nous pouvons dire dès à présent que nous sommes en possession de matériaux dont l'importance est considérable. Convenablement classés, coordonnés suivant un plan bien établi, ils permettront de fixer beaucoup d'éléments nouveaux et de résoudre bien des points douteux. Afin d'en donner brièvement une idée, je vais vous exposer le plan de travail qu'il y aurait à accomplir.

1. (*a*) La première partie devra porter sur la transcription et la lecture des inscriptions. Ces inscriptions devront se subdiviser en deux parties. Il conviendra d'étudier d'un côté ce que les inscriptions votives nous apprennent des donateurs. Les noms de famille et la composition de la famille sont, dans une certaine mesure, lisibles. De plus, dans certains cas, nous voyons que nous avons affaire à des fonctionnaires chinois. Ces éléments épigraphiques nous donneront des renseignements sur le développement du bouddhisme dans les milieux officiels chinois à l'époque des peintures.

(*b*) Les inscriptions devront être étudiées ensuite non plus au point de vue du milieu laïque qu'elles nous révèlent, mais au point de vue de leur valeur religieuse. Il y aura à dégager leur caractère général et à retirer ensuite des renseignements précieux des indications qu'elles nous donnent relativement aux divinités. Grâce à ces inscriptions, nous serons en mesure d'établir d'une façon certaine les identifications des Bodhisattvas et des Buddhas. De plus, au moyen de ces pièces de comparaison, nous pourrons déterminer des types qui échapperaient à présent, parmi les peintures, à toute interprétation certaine.

(*c*) Il y aura, enfin, à rassembler les diverses dates que nous livrent les inscriptions, et à les utiliser aussi bien au point de vue de l'histoire générale du bouddhisme en Chine et au Turkestan chinois, qu'au point de vue de l'histoire de l'art bouddhique.

II

Ces préliminaires établis, nous serons en mesure de commencer l'étude des peintures au point de vue de l'iconographie bouddhique. Le classement s'impose de lui-même. Nous aurons d'abord à étudier :

(1) Les Buddhas — et, pour commencer, à étudier les bannières qui retracent les divers épisodes de la vie du Buddha Çākyamuni. Grâce aux inscriptions que portent les scènes, qui sont précisément les plus difficiles à interpréter, j'ai pu m'assurer dès à présent que les bannières nous livrent toute une série de scènes qui ne figurent pas dans les bas-reliefs gandhariens. Non seulement ces bannières nous montrent des épisodes de la vie du Buddha avant l'illumination sous un vêtement purement chinois, mais leur étude permettra encore de combler des lacunes importantes dans les séries gandhariennes.

Il y aura à examiner ensuite la question des Buddhas mythiques du bouddhisme du Nord. Les documents de votre Mission nous permettent d'assister au développement et à la fixation (?) du culte d'Amitābha, et ils nous donnent des formes du Sukhāvatī qui vont depuis la conception la plus réduite jusqu'à la plus développée.

(2) Après les Buddhas, nous aurons à examiner les Bodhisattvas. Là encore, les documents nous livrent des renseignements des plus précieux. Nous assistons à la multiplication des types de la Kouan-yin (Avalokiteçvara) du bouddhisme du Nord. Nous la voyons multiplier ses formes et toucher de très près à des types de Bodhisattvas qui semblent être dérivés d'elle. Tel est le cas de Bhaishajyarāja et de Kshitigarbha. Pour ce dernier, nous serons même en mesure de donner l'évolution complète de son type, depuis le moment, où, sous la forme d'un prêtre indien, il apparaît comme maître des Six Mondes du Désir, jusqu'à celui où il se développe comme protecteur des âmes enfermées dans le cycle de vie et où il rivalise en faste avec Amitābha lui-même, jusqu'au moment, enfin, où il nous apparaît dans l'enfer bouddhique comme assistant des âmes pécheresses. Ces éléments sont tout à fait nouveaux. Kshitigarbha, sous cette forme, ne nous était connu qu'au Japon au Xe ou XIe siècle. Comme les formes japonaises d'Amitābha et d'Avalokiteçvara, Kshitigarbha remonte au moins au VIIIe siècle et il apparaît comme un élément complètement évolué à Touen-houang.

(3) Dans une troisième partie, je grouperai les assistants des divinités bouddhiques. Grâce aux inscriptions, nous pouvons établir le moment où ils apparaissent, interprétés comme forme bénigne et forme maligne avant d'en avoir pris l'aspect extérieur. Là encore, nous assistons à la constitution du type et voyons par quelle fissure les formes terribles du bouddhisme tantrique ont pénétré dans le bouddhisme du Nord.

(4) Dans une quatrième partie, je traiterai des peintures qui concernent l'enfer bouddhique. Elles nous montrent que la coutume du bouddhisme chinois et japonais consistant à représenter les juges infernaux sous la forme de magistrats chinois, vient de Touen-houang, et appartient à ce même mouvement qui laïcisait sous la forme chinoise les scènes de la Vie du Buddha Çākyamuni. Il est particulièrement intéressant d'établir que cette formule japonaise remonte ainsi beaucoup plus loin qu'on ne le croyait jusqu'ici.

(5) Enfin, dans la cinquième partie de cette seconde division, je grouperai les sujets proprement non-bouddhiques, dont l'étude sera intéressante à divers points de vue et principalement au point de vue de l'influence que les éléments purement chinois ont exercée sur les documents iconographiques du bouddhisme du Nord.

III

Dans une troisième partie, partie qui sera la conclusion générale, il y aura lieu de consacrer :

1° Un chapitre à l'étude chronologique des peintures en groupant les divers éléments iconographiques autour des peintures datées prises comme point de comparaison. On pourra de cette manière dégager la succession des styles divers et éclairer d'une manière inattendue l'histoire de la peinture bouddhique en Extrême-Orient.

2° Enfin, un dernier chapitre devrait traiter de l'évolution de l'art bouddhique au Turkestan chinois et rassembler les divers éléments relatifs à sa conception artistique, aux influences qu'il a exercées sur l'art chinois des T'ang, et sur l'art japonais, depuis l'ère Suiko et l'ère Tempyō (VIIe et VIIIe siècle), jusqu'au temps de la grande réforme iconographique du prêtre Eishin (XIe). Il y aura lieu de tenir compte dans cette étude des influences chinoises que cet art bouddhique a subies lui-même. On pourra récapituler ainsi dans cette conclusion tout ce que les études antérieures auront pu apporter de documents précis et de constatations nouvelles.

IV

Peut-être sera-t-il aussi nécessaire, afin de retirer des documents tout ce qu'ils peuvent donner, de traiter en appendice certains sujets spéciaux.

(1) Les *xylographes* qui nous fournissent au point de vue de l'histoire de la gravure sur bois en Extrême-Orient des documents nouveaux.

(2) Une étude du traité magique sur le nom des mille Buddhas qui existe dans vos collections à deux exemplaires, dont l'un à miniatures est mutilé, et l'autre complet. J'ai relevé sur ce dernier la date de 920. Il y a à retirer de ce traité des renseignements précis sur ces innombrables Buddhas qui figurent dans les frises décoratives ou qui assistent les grandes figures centrales, aussi bien dans les fresques du Turkestan que dans la Chine septentrionale, à Yun-kang, à Long-men, ou au Japon.

(3) Grâce à un dessin, donnant la valeur cosmologique et mystique des différentes parties de la main, puis, aux deux rouleaux de dessins donnant la série des positions mystiques des mains, il sera possible de fixer d'une manière extrêmement précise la signification des différents gestes des mains dans l'art bouddhique.

(4) Enfin, un manuscrit fort endommagé, mais très précieux, nous donne un traité de la figure humaine à l'usage des peintres. C'est le plus ancien que nous ayons. Il conviendra de monter soigneusement ce manuscrit et de l'étudier de près. Il constituera une source de premier ordre pour l'histoire de l'esthétique et de l'art chinois.

Tel est l'ensemble du travail dont, après une étude préliminaire, je puis tracer le plan. Naturellement je me réserve de pouvoir le modifier en cours d'exécution, mais je crois que, dans ses grandes lignes, il restera tel quel, et que, au point de vue des résultats nouveaux que l'on peut escompter, il ne nous donnera des surprises que dans un sens favorable.

II

LES PEINTURES DE TOUEN-HOUANG: LES DONATEURS

PAR

RAPHAEL PETRUCCI

[NOTE.—This chapter, originally intended to take its place in the initial portion of the publication sketched in the above preliminary scheme, was received in 1913 from M. Petrucci in the form of a rough draft. The careful revision of which it stood in need with special regard to the inscriptional readings and their interpretation could, owing to circumstances connected with the War, not be carried out until after M. Petrucci's death. Mr. A. D. Waley, of the Department of Prints and Drawings, British Museum, was kind enough to charge himself in 1917 with this difficult task, devoting much painstaking labour to the verification from the originals of all dedicatory records, &c., referred to. The numerous rectifications proposed by him, having received M. Chavannes' assent, have been embodied in the text now presented.—A. STEIN.]

L'étude des peintures qui ont été rapportées de Touen-houang par Sir Aurel Stein soulève des problèmes divers. Extrêmement précieuses au point de vue de l'art et de l'iconographie bouddhiques, elles ne le sont pas moins au point de vue de l'histoire du bouddhisme dans cette région lointaine de l'empire. Les inscriptions votives nous livrent des renseignements précis sur l'époque de ces documents, car elles fournissent des dates qui se répartissent entre 864 et 983 de notre ère; elles nous informent sur les donateurs dont les images accompagnent celles des Buddhas et des Bodhisattvas; elles nous indiquent leur qualité et les mobiles qui les ont fait agir; elles nous permettent de reconstituer certains aspects de leur vie dans ces périodes difficiles et nous montrent comment la ferveur du sentiment religieux se mêlait aux préoccupations de tous les jours. Aussi m'a-t-il semblé nécessaire, avant d'entrer dans l'étude artistique et iconographique de ces précieux documents, de tirer parti de leur étude épigraphique pour reconstituer ce milieu disparu. C'est à Touen-houang, en effet, à l'extrême ouest du Kan-sou, que les influences diverses venues du Turkestan prenaient contact avec la grande civilisation chinoise; c'est là aussi que l'Extrême-Asie entendit les premières rumeurs du mouvement islamique; c'est là qu'on put prévoir l'invasion prochaine et les conditions d'une lutte tragique. C'est là enfin que s'était constitué ce milieu où la Chine, dominée par le bouddhisme, vouait aux dieux de la doctrine indienne ces images dont

je cherche aujourd'hui à restituer le sens véritable. Toutes ces raisons paraîtront suffisantes, sans doute, pour justifier l'étude préliminaire dans laquelle je vais m'engager tout d'abord.

À tout seigneur, tout honneur. Le dix-septième jour de la septième lune de la huitième année de T'ai-p'ing hing-kouo 太平興國 [1] un fonctionnaire de Touen-houang voue une peinture (Ch. lvii. 004, Pl. LXVI) à Kouan-che-yin P'ou-sa. Les vœux qu'il forme portent aussi bien sur les destinées futures de son âme que sur la prospérité de ses enfants et de ses petits-enfants. Il souhaite qu'ils vivent dix mille fois mille ans, qu'ils croissent en richesse, en honneur, en bonheur, en abondance; s'il pense à l'avenir, il n'oublie pas le passé et il souhaite que les sacrifices se perpétuent sans limite sur l'autel des ancêtres. Enfin, après avoir songé à sa famille, il se préoccupe de l'empire. Il demande à Kouan-yin la tranquillité du territoire, la prospérité non seulement de ceux qui lui sont chers, mais de son pays. À lire l'inscription votive, on le sent préoccupé tout autant de ses administrés que de sa famille.

La tradition chinoise s'y mêle à l'inspiration bouddhique. Sans doute, l'âme doit être conduite dans le bon chemin; mais ces vœux pour la perpétuation des sacrifices aux ancêtres, pour une postérité nombreuse et florissante répondent à un idéal purement chinois, formé longtemps avant l'intervention du bouddhisme, et qui correspond à la conception chinoise du bonheur.

Les inscriptions votives nous ont conservé des renseignements précieux sur ce fonctionnaire de Touen-houang et sur sa famille. Il s'appelait Mi Tseu(?)-te 米資(?)德. Il est figuré sur la peinture dans l'acte de l'adoration, tenant dans ses mains une cassolette à encens d'où s'élève la fumée du parfum sacré. Il est accompagné de trois fils et de deux petits-fils, tous vêtus comme lui du costume de fonctionnaire. Trois autres petits-fils et un arrière-petit-fils, encore enfants, l'accompagnent ainsi que sa femme, sa fille et ses belles-filles.

La famille entière, telle qu'elle est représentée, est composée comme suit: Le préfet Mi Tseu(?)-te et son épouse dont le nom de famille est Ts'ao 曹, leur fils Yuan-tch'ang 願昌 et sa femme dont le nom de famille est Yin 陰; leur second fils (?)-ying ◯盈 et sa femme dont le nom de famille est Wang 王; leur troisième fils Po-tch'ang 百長 et sa femme dont le nom de famille est K'ang 康. À côté de la donatrice on voit leur fille. L'inscription qui la concerne nous dit expressément qu'elle a quitté sa famille pour entrer dans la famille Li 李. Puis nous trouvons le petit-fils Tch'eou-t'a 醜獺 [2] et sa femme, du nom de famille Tchang 張. Ils ont un enfant, figuré debout, à côté de sa mère. Enfin les petits-fils Tch'eou-ting 醜定 et Tch'eou-eul 醜兒, en vêtements de jeunes garçons, le petit-fils Tch'ang-tien 長典 et l'arrière-petit-fils portant tous deux la robe des enfants, complètent ce groupe déjà nombreux.

Nous rencontrons ensuite (Ch. 00101) un personnage chargé de nombreux titres. Il est *tsie-tou-ya-ya* 節度押衙, *yin-ts'ing-kouang-lou ta-fou* 銀青光祿大夫, *cheou tsouo-ts'ien niu-wei tchong-lang tsiang* 守左遷牛衛終郎將, *kien-kiao kouo-tseu tsi-tsieou* 檢校國子祭酒 et en même temps *tien tchong cheu yu-cheu* 殿中侍御史. Malgré leur abondance, ces titres ne permettent guère de préciser quelles étaient les fonctions de ce fonctionnaire subalterne. Nous savons par l'inscription votive qu'il s'appelait Tchang Ho-yong 張和榮, que sa femme était de la famille P'eng 彭 et qu'il invoque la protection de Bhaishajyaguru, le Buddha de médecine, afin de rentrer dans son pays natal rapidement et sans éprouver aucun malheur. Autant par le caractère de la peinture que par les vêtements des donateurs, la donation semble avoir été faite sous la dynastie des T'ang. Cependant le district de Touen-houang était si fréquemment coupé, dès cette époque, du reste de l'empire, que le fonctionnaire, rentrant dans sa patrie après avoir accompli les devoirs de sa charge, avait d'abondantes raisons de craindre les dangers du retour.

Une autre peinture (Ch. 00167, Pl. LXI) appartient à la catégorie des vœux faits pour les morts. Elle est offerte à la gloire de Kouan-che-yin par un membre de la famille Tchang 張 qui se glorifie de brûler sans cesse des parfums et d'entretenir une lampe perpétuelle en souvenir des parents morts. Ceux-ci figurent à la place des donateurs. C'est d'abord le père mort Tchang Yuan-tchou 張員住, puis l'un de ses fils, capitaine d'une compagnie d'infanterie à Touen-houang; puis un troisième personnage, frère ou cousin de celui-ci, portant, comme les autres, le costume de fonctionnaire. De l'autre côté, se trouvent leurs femmes respectives. La mère a pour nom de famille Li 李, les belles-filles ont pour nom de famille: l'une Sung 宋, l'autre Fan 范.

[1] C'est-à-dire le 27 août 983, sous la dynastie des Song.

[2] ['Ugly Otter', a depreciatory name, such as given to children in order to avert the influence of evil spirits.—A. D. W.]

La peinture est datée de la quatrième année *jen chen* de K'ai-pao; mais il y a une erreur dans les lettres du cycle, car c'est à la cinquième année K'ai-pao que s'applique la désignation cyclique *jen chen*; la peinture doit être datée du 27 septembre 971.[3]

Un officier Yang Tong-yu 楊洞芋 a fait graver un fort mauvais xylographe (Ch. 00205) de Samantabhadra. Il portait le titre de *tsie-tou-ya-ya* 節度押衙 dans l'armée *kouei-yi*, en garnison à Touen-houang. Les motifs de son vœu sont clairement indiqués dans l'inscription. Il demande que les frontières soient tranquilles, que tous les hommes, occupés de leurs affaires, ne s'adonnent ni aux complots ni aux troubles. Il demande que les grands feux, qu'on allumait dans les postes isolés des frontières pour annoncer quelque danger imminent et avertir de proche en proche les gardiens du *limes* chinois, garantissent la sécurité la plus parfaite; que l'empire soit en paix; que son chef, le T'ai-pao du district, jouisse d'une vie longue comme celle de la grue. Si l'on tient compte de ce que les hommes demandent aux dieux de les garantir précisément contre les souffrances les plus communes, on se rendra compte que le séjour de Touen-houang manquait de sécurité et que la vie de ces officiers et de ces magistrats devait être incertaine, traversée de beaucoup d'alarmes.

On en aura une confirmation éclatante dans l'inscription d'un xylographe (Ch. 00185; Pl. CIII) exécuté sur l'intervention d'un autre officier. Il est *tsie-tou* 節度 de l'armée *kouei-yi*; il est commissaire 使, inspecteur 觀察 des districts de Koua, Cha, etc. 瓜沙等州; commissaire préposé aux champs des camps militaires dans sa juridiction 處置管内營田; commissaire *ya-fan-lo* 押蕃落; inspecteur spécialement promu 特進檢校; grand maître 太傅; marquis inaugurateur du royaume pour la préfecture de Ts'iao 譙郡開國侯. Il s'appelle Ts'ao Yuan-tchong 曹元忠, et a fait graver une planche représentant Kouan-yin. Le graveur a signé son œuvre; il s'appelait Lei Yen-mei 雷延美. Le donateur invoque Kouan-yin afin qu'elle assure la bienveillance du génie protecteur des villes fortifiées 城隍; afin que le district soit prospère, que les hommes s'entendent et ne voient que des choses heureuses, que les épidémies se dissipent, que les routes de l'Est, vers la Chine, de l'Ouest, vers le Turkestan, soient ouvertes et libres; qu'au Nord, les Tartares, au Sud les Tibétains cessent leurs déprédations et leurs révoltes, que les signaux d'alarmes ne retentissent plus. Il date cette invocation du troisième jour du septième mois de la quatrième année K'ai-yun; cette date correspond au 2 août 947. Or, à ce moment, depuis le mois de février de la même année, un chef des Tartares K'i-tan avait saccagé K'ai-fong-fou et réduit en servitude l'empereur et sa famille. Il l'avait exilé dans le pays de Moukden, il avait occupé le palais impérial et si bien tué et pillé que le pays était devenu désert. Chassés par le peuple en révolte, les K'i-tan s'étaient retirés avec leurs captifs et leur butin. Puis, le 10 mars 947, l'empereur Kao-tsou, des Han, était proclamé à K'ai-fong-fou, la capitale. De tous ces événements les gens de Touen-houang, en août 947, ne savaient rien. Il était bon de demander à la Grande Miséricordieuse l'ouverture et la tranquillité des routes!

C'est encore (Ch. 00224) un fonctionnaire qui voue une peinture à Bhaishajyaguru.[4] Le Buddha de médecine apparaît, tenant la sébile ou *pātra* et flanqué, à sa droite, du Bodhisattva Samantabhadra; à sa gauche, du Bodhisattva Mañjuçrī. Le donateur tient une fleur de lotus, il est accompagné de deux fils en bas âge. Sa femme est suivie d'une fille qui semble porter un rouleau de soie, offert en don. L'inscription est trop mutilée pour qu'on en puisse tirer des indications utiles, mais on y peut lire la date: le huitième jour de la troisième lune de la quatrième année T'ien-fou, marquée des signes *ki-hai* (1er avril 939).

Ailleurs (Ch. lviii. 003, Pl. LXVII; *Th. B.*, Pl. XXV) c'est un malade qui s'adresse à Kshitigarbha pour demander le rétablissement de sa santé compromise. Le Bodhisattva siège, le châle des voyageurs sur la tête, le bâton du moine mendiant dans la main droite, la boule 'maṇi' dans la main gauche. Deux Bodhisattvas l'assistent. Le fidèle K'ang Ts'ing-nou a voué la peinture pour ses parents morts. L'inscription du cartouche central nous livre son désir. 'Son corps habite dans la Demeure du Feu'; il souffre d'une longue et douloureuse maladie. Il demande au Maître des Six Mondes de le guérir et de le faire échapper aux cinq voies (*gati*) par lesquelles l'homme est enfermé dans la roue des transmigrations. C'est à ce titre qu'il s'adresse au Bodhisattva régnant sur les cycles douloureux de la vie. Cependant il n'oublie point ses proches et il souhaite que tous, parents par alliance ou parents par le sang, reçoivent de la protection divine leur part de bonheur. Ces parents, ils sont, au moins en partie, représentés sur la peinture. C'est d'abord le père mort. On trouve, d'autre part, la mère morte, du nom de famille Yin 陰. Ces morts pour lesquels la peinture a été vouée sont accompagnés de deux personnages dont l'un est

[3] [For the correct date, see Chavannes, Appendix *A*, V. B.]
[4] [For this identification, cf. below, p. 1409.]

désigné comme étant le fils Hing-t'ong 幸通, l'autre comme étant la deuxième (?) fille. Le donateur vivant ne figurant nulle part et étant seulement rappelé par l'inscription, il s'ensuit que ce fils et cette fille doivent être, eux aussi, rangés au nombre des parents morts. Nul doute que l'action méritoire du vivant vis-à-vis des morts ne lui assure la guérison dans cette vie, et, dans l'autre, l'affranchissement du désir et le repos dans le Paradis d'Amitābha.

La dédicace est datée du vingt-deuxième jour du cinquième mois de la quatrième année K'ien-long, année marquée des caractères cycliques *kuei-hai*. Cette date correspond au 26 juin 963. Mais il est à remarquer que, à partir du 3 décembre 963 (cf. *Song che*, chap. i. p. 7), le nom de la période d'année fut changé en K'ien-te et l'année 963 fut donc comptée comme la première année K'ien-te, mais dans ses derniers jours seulement ; au 26 juin, c'était encore la quatrième année K'ien-long.

Une peinture non datée (Ch. lvii. 001, Pl. LXVIII), vouée à Kouan-yin, nous montre un donateur dont le nom est malheureusement indéchiffrable. Il est accompagné de sa sixième fille et de son fils. Celui-ci porte un titre de fonctionnaire dont on ne peut lire que le dernier caractère 史. Il a pour nom de famille Tchang 張, ce qui nous livre en même temps le nom de famille du père. Il se désigne aussi sous le nom de 'esclave du Buddha'; le père est borgne de l'œil gauche et cela montre qu'un certain réalisme se fait jour dans ces portraits de donateurs. D'autre part, l'indication que la mère est morte semble indiquer que son mari et ses enfants sont intervenus auprès de Kouan-yin miséricordieuse en faveur de son âme.

Ailleurs (Ch. 00102, Pl. LX), on voit toute une famille groupée au bas d'un paradis de Kouan-yin à large ordonnance. Le père, capitaine de compagnie dans l'armée kouang-ngan 光案, un autre parent et un fils; la mère et deux belles-filles sont réparties de part et d'autre du cartouche central. Les hommes portent tous le costume de fonctionnaire. Il en est de même sur la peinture numérotée Ch. xxxiii. 001, où figurent un fonctionnaire, sa femme et leurs deux fils aux pieds d'Amitābha. On retrouve encore deux fonctionnaires assistés de leur femme sur une peinture vouée à Kouan-yin (Ch. xxi. 001) en octobre 963.

Une autre peinture (Ch. xlvi. 008) se range dans cette classe des vœux faits pour les morts. Elle représente Amitābha. Dans la partie réservée aux donateurs, on voit d'une part un fonctionnaire, le père mort Leang Tsin-t'ong 梁進通, tenant la cassolette à encens et assisté d'un enfant portant un éventail; de l'autre, une femme, la belle-mère morte, du nom de famille Ling-hou 令狐. Elle tient une fleur; elle est assistée, elle aussi, d'une enfant portant une offrande. Les inscriptions nous indiquent ici que la donation est faite par le fils et la femme du fils des personnages représentés. C'est une donation faite pour le bénéfice des parents morts.

L'inscription du cartouche central est à peu près complètement détruite. On y devine plus qu'on n'y lit encore des caractères qui permettent de la dater de la septième lune de la deuxième année K'ien-te, c'est-à-dire d'août 964.[5]

Une autre peinture (Ch. liv. 006, Pl. LXIX ; *Th. B.*, Pl. XXII) nous fait quitter le monde des fonctionnaires de Touen-houang. Elle représente une Kouan-yin au flacon et, les inscriptions de la face et du revers de la peinture nous ayant été conservées, nous sommes abondamment renseignés sur les motifs des donateurs.

La peinture semble avoir été exécutée sur l'intervention de la nonne Fa-liu qui l'offre en souvenir d'une cérémonie accomplie par elle ou pour elle. Elle associe à sa donation son frère cadet mort. Celui-ci, qui porte un titre de surveillant chargé des vérifications dans le palais impérial 試殿中監 est représenté, cependant, sous les formes d'un enfant. Deux invocations, l'une en phrases rythmées de quatre caractères, l'autre en phrases rythmées de sept caractères, chantent les louanges de Kouan-yin. Les vœux exprimés sont, comme il convient, d'une nature plus purement religieuse. La bonzesse Fa-liu associe à son acte pieux son frère mort Tchang Yeou-tch'eng. Elle demande pour les parents morts les félicités du paradis d'Occident : pour les parents vivants, la longévité la plus extrême. Quant à Tchang Yeou-tch'eng, dans une dédicace vraisemblablement antérieure à celle de la bonzesse, il intervient aussi pour le vénérable moine, instructeur de sa sœur aînée et qui, ayant eu la mission de la préparer à la vie religieuse, devient son patron spirituel. Cependant, malgré ces préoccupations tout intimes, le vœu constant de la malheureuse population de Touen-houang se trouve encore répété : 'Pour que l'empire soit en paix.'

Cette peinture est datée de la dixième année T'ien-fou 天復, année *kang-wou*, le quinzième jour du septième mois. Cette date correspond au 22 août 910. Cependant le *nien-hao* T'ien-fou avait été abandonné depuis

[5] [But see above, p. 1047, for date as read by Mr. Waley, A.D. 952.]

le 27 mai 904 : en outre, le premier juin 907 la dynastie T'ang avait abdiqué. Ici encore, la région de Touen-houang paraît avoir été peu au courant des événements qui s'étaient passés en Chine.

Des moines ont aussi participé à ces donations. Sur une peinture (Ch. xx. 005) qui, avec une erreur d'un an dans la dénomination du *nien-hao*, porte la date du 25 décembre 892, on voit des religieux figurer à titre de donateurs. Le çramaṇa Tche-kang 智剛 et la nonne Cheng-ming (?) 勝明 (?) sont tous deux désignés l'un dans le cartouche central, l'autre dans l'énumération des personnages comme des 'petit-fils'; ils doivent donc être frère et sœur. Seuls nommés dans l'inscription principale, ils rappellent qu'ils ont fait l'offrande de cette peinture pour le bénéfice des nonnes défuntes et des ācāryas maîtres de la discipline religieuse. Cependant ils ont associé à leur acte religieux des membres de leur famille. Tche-kang et Cheng-ming figurent de part et d'autre du cartouche central. Mais à côté d'eux on trouve le moine P'ou-tsing 普淨, le moine Lang-tsing 朗津, une femme Miao-tchen 妙眞, et un jeune homme Ho-tseu 和子.

Il n'est pas facile de démêler le lien de parenté de ces divers personnages. On ne sait si Miao-tchen est la grand'mère, la mère ou la sœur des deux principaux donateurs, ni si Ho-tseu est leur frère, leur fils ou leur neveu. Peu importe, il est certain, en tout cas, qu'ils font partie d'une même famille dans laquelle, sur six membres intervenant à la donation, quatre sont entrés dans les ordres et portent le costume de moine.

Ailleurs (Ch. xx. 004) une image de Kouan-che-yin à six bras et onze têtes, assistée des Bodhisattvas de la lune et du soleil, a été offerte par le bonze Yuan-houei 元惠 assisté de son novice Lieou-t'ong 留通. Tous deux sont figurés à la place réservée aux donateurs ; mais, chose exceptionnelle, on voit en face d'eux, de l'autre côté de l'inscription votive, une figure de Maitreya.

On voit aussi des laïques mêlés à des bonzes. C'est le cas d'une autre peinture (Ch. xlvi. 0013) représentant Kouan-yin. Un bonze et une nonne auprès de laquelle se trouve un enfant sont accompagnés de deux fonctionnaires. L'état de l'inscription ne laisse entrevoir que les formules courantes de ces donations pieuses. Plus loin, c'est un Vajrapāṇi au pied duquel figurent comme donateurs un bonze Yuan-tch'eng 願成 tenant une cassolette à encens et un laïque égrenant un chapelet; ou bien encore un Kshitigarbha (Ch. i. 0012, Pl. LXII) aux pieds duquel on voit un bonze assistant un laïque en costume de fonctionnaire et une bonzesse précédant une femme aux riches atours.

Dans une peinture à très large ordonnance (Ch. lv. 0023; *Th. B.*, Pl. XVI), on voit encore intervenir des moines et des nonnes. Samantabhadra et Mañjuçrī s'avancent, l'un sur le lion, l'autre sur l'éléphant à six défenses, assistés chacun de deux Bodhisattvas portant un parasol à trois étages. Au-dessus d'eux, quatre Kouan-yin aux épithètes diverses dominent ; et, au-dessous, figurent les donateurs. Le *nien-hao* que l'inscription centrale permet de déchiffrer est exacte. C'est la cinquième année de la période Hien-t'ong ; c'est-à-dire l'an 864.

On voit, d'un côté, le père, le bonze Chen-wei 神威 avec trois de ses fils : T'ang-cheng 唐晟, T'ang-siao-cheng 唐小晟 et T'ang? 唐○. De l'autre côté, la bonzesse mendiante désignée comme la sœur aînée (?) et la bonzesse Fou 福. Puis, deux femmes, épouses des deux frères T'ang désignés d'autre part, et dont l'une est indiquée comme étant la treizième belle-fille.

Nous avons donc devant nous le père et la mère, entrés tous deux dans les ordres, le terme de 'sœur aînée' qui désigne la mère, devenue religieuse mendiante, étant un terme respectueux et qu'il ne faut pas prendre à la lettre. Une fille semble avoir suivi l'exemple de ses parents, c'est la bonzesse Fou. Trois fils demeurent dans la vie profane, dont deux mariés.

D'autres inscriptions nous font pénétrer plus intimement dans l'âme des donateurs de Touen-houang. Elles se rapportent toutes à des laïques, petites gens dont la vie plus simple et la foi plus naïve se sont exprimées aussi d'une manière plus réaliste et plus touchante.

Tels sont les fragments que l'on peut déchiffrer sur une peinture mutilée (Ch. lxi. 008), qui n'est que le fragment de gauche de la peinture Ch. lii. 004 (Pl. LXII) :

'. . . ensemble ils conversent et se divertissent : quoique leurs parents soient avancés en âge et n'aient qu'une vigueur affaiblie et chancelante, depuis le matin jusqu'au soir ils ne viennent point demander de leurs nouvelles ; ils recherchent pour eux des épouses ; ils se procurent des fils et des filles d'une autre (génération) ; leurs parents en retour sont négligés : ils pensent égoïstiquement à leurs femmes et à leurs enfants.'

Nous avons ici la satire des jeunes qui négligent leurs parents.

L'autre fragment, quoique très mutilé, montre quels sentiments touchants ont guidé ces donateurs de Touen-houang. Ici, on peut déchiffrer le sujet : c'est un Paradis d'Amitābha de formule assez réduite. La partie

inférieure ne nous renseigne que fort peu sur les personnages à l'intervention desquels le tableau fut exécuté. On y voit la 'bonne mère' du nom de famille Lieou 劉 et une inscription indique qu'on devait y trouver aussi la troisième fille, la plus âgée des sœurs cadettes du donateur. Mais deux inscriptions, dont l'une est incomplète, nous disent avec quel sentiment de reconnaissance et d'amour le donateur songeait à ses parents morts. 'Ils ont élevé les enfants et sont partis dans la Voiture Parfumée,' dit-il, 'la bienveillance de la mère est pareille au grand ciel qui n'a pas de faîte; comment la payer de retour? Le père et la mère entourent (l'enfant) de leurs bras et, très doucement, il gazouille: il a le sourire aux lèvres, mais n'a pas encore parlé. Quand il a faim et qu'il faut lui donner à manger, si ce n'était sa mère, personne ne lui passerait à la bouche sa nourriture; quand il a soif et qu'il faut lui donner à boire, si ce n'était sa mère, personne ne lui donnerait son lait!' Et, puisqu'il ne peut rien faire dans ce monde pour les parents morts, pieusement et le cœur plein de souvenir, le donateur fait un vœu au Buddha tout puissant du Paradis d'Occident pour que ceux qui l'ont tant aimé renaissent affranchis des misères de la vie, dans la Terre de Pureté.

Les injures des siècles ont détruit la date sur la soie rongée et réduite en poussière: c'est un symbole. Le sentiment profond qui fit agir, voici un millier d'années, ce fidèle bouddhiste, n'est-il pas de tous les temps?

Un autre xylographe (Ch. xliii. 004, Pl. CII) nous a conservé, avec le nom du donateur Li Tche-chouen 李知順, celui du graveur Wang Wen-tchao 王文沼. Il est daté du 8 août 980. Il ne nous donne aucune indication relativement aux donateurs, mais il nous montre le rôle magique que prenaient certaines de ces images. L'inscription nous dit, en effet, que, si l'on porte l'image, entourée de sa formule sanscrite, sur la tête ou sur les bras, on est protégé par les Rois-dragons, on réussit en tout, on n'est jamais oublié par les Buddhas, on est exempt de fièvres et d'autres maladies, on ne peut être victime d'un sort. Même les crimes commis dans les existences antérieures seront pardonnés. Ce n'est donc plus une image votive exécutée pour 'gagner des mérites' en vue des réincarnations futures: c'est un véritable talisman.

Kouan-yin n'est pas seulement celle qui montre le chemin de la vie bienheureuse. Une peinture sur papier (Ch. lxvi. 002) vouée à la Kouan-che-yin aux onze têtes, donneuse de la longue vie, met en scène une femme, l'épouse Hing 行, laquelle remercie le Bodhisattva de lui avoir donné une fille. La peinture a été enjolivée de fleurs de papier découpé peint et doré et en face de la donatrice, on a dessiné un enfant agenouillé jouant de la guitare. Il est représenté sous la forme de ces enfants divins qui jouent de la musique ou dansent dans les peintures à large ordonnance d'Amitābha ou d'Avalokiteçvara. Il paraît du reste avoir été découpé dans un tableau de ce genre et collé ensuite, pour satisfaire la donatrice, sur la peinture vouée par elle.

Une peinture assez grossière, sur papier (Ch. 00184), représentant Kouan-yin à six bras et à onze têtes, a été vouée par un enfant du nom de Tsai-eul 再兒. Il voue cette image 'pour que le royaume soit tranquille et vertueux'. La date ne porte que des signes cycliques. On peut l'attribuer avec assez de probabilité à l'an 955. Il semble que ce soit l'enfant que l'on aperçoive à la gauche de Kouan-yin, à genoux et en prière. Il est représenté sous la forme des âmes renaissantes au Paradis d'Amitābha comme un petit enfant nu dansant dans l'éternelle joie de la Terre de Pureté.

Une image de Kshitigarbha (sans inscription), en patron de voyageurs (Ch. 0084, Pl. LXX; *Th. B.*, Pl. XL), a aussi été vouée par un enfant. Le portrait du donateur ne laisse pas de prise au doute. Il est figuré à mi-corps, les mains jointes, entre deux tiges de fleurs. Il est intéressant de voir Kshitigarbha, protecteur au Japon des âmes enfantines, lié ici à une effigie d'enfant. Ailleurs, sur une peinture plus grossière encore (Ch. liv. 0011), véritable et naïve enluminure, un homme du peuple, un artisan, le cordonnier Souo Tchang-san 索章三 a signé aussi son offrande à Kouan-che-yin P'ou-sa.

Certaines des inscriptions votives ont montré que de vieilles croyances se mêlaient au bouddhisme tel qu'il était pratiqué à Touen-houang. Ici (Ch. 00205) le donateur souhaite que son chef, le t'ai-pao du district, ait une vie longue comme celle de la grue et qu'il obtienne la drogue d'immortalité. Ailleurs (Ch. 00185; Pl. CIII) un officier demande l'intercession de Kouan-yin pour lui assurer la bienveillance du génie protecteur des places fortes; ailleurs, enfin, un xylographe (Ch. xliii. 004, Pl. CIII) représentant le Bodhisattva au milieu d'une prière sanscrite devient, comme nous l'avons vu, un véritable talisman. La valeur purement magique de l'image pieuse est ici évidente. Des charmes de ce genre sont devenus innombrables dans le bouddhisme tibétain.

On voit comment, à Touen-houang, de vieilles idées purement chinoises comme celles qui touchent à des génies locaux, à l'élixir de longue vie cherché avec tant d'ardeur par les ermites taoïstes de l'époque des T'ang, se mêlaient à des superstitions populaires pour envahir le bouddhisme chinois et lui donner la physionomie sous

laquelle nous le connaissons. Des documents non-bouddhiques, trouvés par Sir Aurel Stein dans la cachette de Touen-houang, viennent nous confirmer dans cette façon de voir. Ils consistent en manuscrits magiques ou astrologiques. L'un (Ch. 00214, Pl. XCVIII) comprend des dessins bizarres, chimères ou têtes d'hommes, qui doivent mettre celui qui les trace à l'abri des accidents et des maladies.

J'ai trouvé aussi parmi ces matériaux divers un manuscrit astrologique (Ch. 00206) ainsi qu'un fragment de calendrier astrologique (Ch. 00164, Pl. C) et, enfin, un fragment de manuscrit constituant un véritable traité des Points de Beauté (Ch. 00209, Pl. XCVI) et indiquant leur valeur faste ou néfaste suivant les positions qu'ils occupent sur le visage ou sur le corps.

On a là les débris de croyances qui, à des titres divers, sont étrangères au bouddhisme. Les unes, comme la croyance à l'élixir de la longue vie, au génie protecteur des places fortes, aux génies des étoiles, sont plus proprement taoïstes ; il en est de même pour les pratiques astrologiques dont on retrouve la trace. Les autres, comme la déesse à tête de chat ou d'oiseau, comme la croyance à la valeur faste ou néfaste des points de beauté, à la valeur de talisman que peuvent prendre les images bouddhiques, dépendent de ce sentiment populaire où les impulsions primitives continuent à agir et qui s'affirment sous des formes semblables dans les milieux les plus divers. On voit que la foi bouddhique de nos donateurs n'était pas exempte de mélanges impurs. Les prêtres des grottes accueillaient avec indulgence ces manifestations diverses d'un monde auquel ils appartenaient ; ils en partageaient sans aucun doute les rêveries incertaines et les superstitions.

Voilà donc sous quel aspect se présente ce milieu où vivaient les personnages, — fonctionnaires, moines, nonnes, laïques ou artisans, — à l'intervention desquels nous devons nos peintures. À choisir parmi celles-ci les exemplaires assez complets pour que, par les représentations des donateurs ou par les inscriptions qui les accompagnent, nous ayons retiré de leur étude quelques renseignements sur ce milieu, nous avons pu déterminer avec exactitude quelles étaient ses préoccupations et les pensées qui le dirigeaient.

III

ESSAI SUR LES PEINTURES BOUDDHIQUES DE TOUEN-HOUANG: LES MAṆḌALAS

PAR

RAPHAEL PETRUCCI

[NOTE.—This essay was originally intended by its author for separate publication in a periodical, an arrangement which the outbreak of the War in 1914 rendered impracticable. It was revised for print in 1917 after M. Petrucci's death by MM. Chavannes, Foucher, and Sylvain Lévi, and is published here in accordance with the wishes of Madame Petrucci and M. Chavannes ; cf. above, pp. 834 sq. Access to the original materials was not possible at the time for those scholar friends of M. Petrucci. Hence their revision could not be made as complete as he himself might have wished it.

The following 'Remarque préliminaire' was prefixed to the revised copy of the essay as received from the fellow-scholars above named.—A. STEIN.]

[REMARQUE PRÉLIMINAIRE.]

[Au cours du présent travail M. R. Petrucci n'a cessé d'employer le mot *maṇḍala* dans une acception spéciale et qu'il importe de préciser. Il n'entend pas en effet par là, au sens propre du mot, des figures géométriques de forme circulaire et subdivisée en casiers symétriques où nombre de divinités se répartissent autour de l'image placée au centre. Pour lui *maṇḍala* signifie simplement, de même qu'au Japon,[6] une peinture disposant symétriquement, mais en dehors de tout diagramme, un ensemble d'assistants autour d'un personnage central. Le type le plus connu de ces groupes cycliques est celui qui constitue le paradis d'Amitābha.]

[6] Cf. M. Anesaki, *Buddhist Art*, Boston, 1915, p. 15, etc.

LES *MAṆḌALAS*

INTRODUCTION

Les peintures bouddhiques rapportées de Touen-houang par Sir Aurel Stein constituent l'un des ensembles le plus nombreux et le plus divers que nous ayons à ce jour pour étudier la constitution de l'iconographie du bouddhisme du Nord dans l'Asie centrale. Les peintures, provenant de la même source et rapportées par la Mission Pelliot ; les peintures, les fragments de fresques ou les fresques rapportées par les Missions allemandes, russes ou japonaises, la plupart antérieures aux peintures de Touen-houang, offrent aujourd'hui à celui que ces questions intéressent, un amas de matériaux d'une richesse exceptionnelle. Il faudra sans doute des années pour en tirer tous les renseignements qu'ils peuvent livrer, résoudre tous les problèmes qu'ils soulèvent. On aperçoit déjà cependant l'intérêt qu'il y aurait pour l'histoire de l'art et de la religion bouddhiques à en poursuivre une étude comparative et à rassembler dans un cadre historique ces éléments épars. Non seulement ils montrent à un observateur averti le lien qui les rattache les uns aux autres, les influences mutuelles et le développement commun ; mais encore ils révèlent des origines lointaines qui, à travers la Bactriane, la Perse sassanide et l'Inde, rappellent des civilisations plus proches de notre histoire, et dévoilent la lointaine extension du monde antique dont l'inspiration vient mourir au seuil des terres chinoises.

Il serait prématuré, cependant, de s'engager dès à présent dans une aussi vaste étude. Si les matériaux existent, s'ils semblent prêts à livrer leur secret et si l'enthousiasme de la découverte les anime d'une vie cachée, l'esprit critique n'en reprend pas moins ses droits. Il montre combien serait éphémère un effort qui, fondé sur des ressemblances superficielles et une étude insuffisante, conduirait à une construction où la chimère et la fantaisie des hypothèses prendrait la place de l'analyse réfléchie et d'une sûre explication. Quelque tenté que l'on puisse être de tracer dès à présent une esquisse de cette histoire ensevelie sous les sables, prodigieusement nouvelle parce qu'elle révèle un monde et une civilisation il y a peu d'années encore inconnus, il faut se résigner à remettre à plus tard cette œuvre brillante. Pour le moment, les monographies s'imposent. Il nous faut des analyses précises et sûres des documents découverts. Ceux qui ont la bonne fortune d'être les premiers à les étudier se doivent de construire, dès le premier abord, des fondations durables à l'édifice futur. Il leur appartient de préparer les matériaux d'une œuvre qui renouvellera l'histoire. Il faut que cette étude préliminaire soit faite dans des conditions telles que les conclusions les plus importantes soient définitives. Plus modeste, leur effort sera plus durable. Quand on a l'honneur de manipuler les sources de l'histoire, on peut bien faire le sacrifice des brillantes constructions qui n'ont que trop occupé le passé aux exigences de la science moderne qui comporte la collectivité de l'effort.

Telles sont les raisons qui m'ont conduit à écrire le présent travail. Chargé par Sir Aurel Stein et le Ministère anglais des Indes de l'étude des peintures bouddhiques de Touen-houang, j'ai été amené, après trois ans de travail, à juger la question si complexe que cette étude monographique devait elle-même se trouver divisée en monographies diverses. C'est par une série de travaux d'approximation qu'on en pouvait saisir l'ensemble. Aussi ai-je essayé de me plier à cette discipline que je me suis permis d'exposer plus haut. Le résultat de cet effort est l'essai que je présente aujourd'hui sur les *maṇḍalas* de Touen-houang.

I

La Date et les Origines des Maṇḍalas.

Parmi les peintures bouddhiques rapportées de Touen-houang par la Mission Stein, les *maṇḍalas* forment un groupe à part. Du moins, est-il bien facile de les déterminer lorsqu'ils apparaissent sous une forme largement développée, avec la nombreuse figuration qu'ils comportent. Si l'on parcourt la collection des photographies des fresques de Touen-houang systématiquement relevées par la Mission Pelliot,[1] il est facile de voir que le sujet d'un grand nombre de ces fresques n'est autre qu'un ensemble d'images groupées autour d'un personnage central et qui constitue en quelque sorte le Paradis d'un Buddha. Les peintures ne font que répéter, en les réduisant quelquefois, ces ordonnances fastueuses. Tandis qu'à Chötschö les grandes fresques rapportées par M. von Le Coq nous

[1] Cette collection de photographies a été donnée par M. Pelliot à la Bibliothèque d'art et d'archéologie fondée par M. Doucet.

montrent une préférence marquée pour la représentation de scènes de Praṇidhi,[8] Touen-houang nous révèle au contraire le goût des représentations paradisiaques et un envahissement plus marqué dans l'iconographie des Bouddhas fabuleux.

Il n'en faudrait pas conclure cependant que la représentation des *maṇḍalas* n'était pas usitée dans le Turkestan oriental et à Chötschö même. Les hautes fresques ont été détruites en grande partie. Seules, les portions les plus basses ont été préservées par le sable sous lequel elles étaient ensevelies. Le reste des peintures a dû être vite effacé par le vent furieux qui, soulevant des ouragans de sable, les usait sans remède en mitraillant le mur de parcelles de silice qui le passaient à l'émeri. Cependant, les parties basses de certaines fresques suffisent pour que l'on puisse y déterminer la représentation d'un *maṇḍala*. C'est le cas par exemple pour les fragments de fresques reproduits dans les planches 8, 32,[9] 45 (fragments *e* et *c*);[10] 46 (fragment *f*).[11] L'étude de ces fragments et leur comparaison avec les *maṇḍalas* bien déterminés de Touen-houang mettent ces conclusions hors de doute.

Il est possible de fixer d'une manière assez précise l'époque à laquelle les *maṇḍalas* de Touen-houang furent exécutés. Certaines de ces peintures portent la date à laquelle elles furent vouées au temple par de pieux donateurs. On relève sur un *maṇḍala* de Bhaishajyaguru (Ch. 00224) la date de 939 : c'est la plus ancienne. Un *maṇḍala*, de Kouan-yin (xlvi. 0013), porte la date de 957 ; un autre, de Kouan-yin (xxi. 001), 963 ; deux autres, de Kshitigarbha (lviii. 003), 963 ; un autre, d'Amitābha (xlvi. 008), 952 ; enfin un autre, de Kouan-yin (00167), 972.[12] D'autre part, sur l'ensemble des peintures de Touen-houang, on relève les dates extrêmes de 864 à 983 ; on peut donc conclure avec certitude que les représentations de *maṇḍalas* à Touen-houang remontent au plus tôt à la deuxième moitié du IXe siècle et ne sont pas postérieures à la fin du Xe. Devons-nous conclure de ces données que nous avons ici les premières représentations peintes des *maṇḍalas* à large ordonnance, constitués sous leur forme définitive ? Ce que j'ai dit plus haut à propos de la représentation de *maṇḍalas* dans les fresques de Chötschö infirmerait cette manière de voir car, quelle que soit l'opinion que l'on puisse professer sur la date de ces fresques, il paraît bien difficile de pouvoir les considérer en tout état de cause comme postérieures au VIIIe siècle. Sans doute, nous n'avons pas à Chötschö le *maṇḍala* dans son intégrité, mais comme on le verra par la suite, les figures représentées sur les parties inférieures des fresques prouvent à toute évidence que le *maṇḍala* disparu en partie comportait le plus large développement possible.

Il est donc évident que la représentation des *maṇḍalas* était déjà une habitude acquise avant les figurations que nous rencontrons à Touen-houang au IXe siècle. Elle remonte sans aucun doute au VIIe et au VIIIe siècle. Pouvons-nous la faire remonter plus haut encore et chercher au delà du Turkestan oriental son lieu d'origine ? Un document, très difficile à interpréter, tendrait à me faire donner à cette question une réponse affirmative.

Il s'agit d'une peinture (Ch. xxii. 0023, Pl. LXX ; *Th. B.*, Pl XIV) malheureusement en lambeaux et qui constitue l'un des documents figurés les plus intéressants de tous ceux qui sont venus de Touen-houang. Elle rassemble des figures de Buddhas et de Bodhisattvas dont le caractère gandhārien frappe dès le premier abord. Sur la soie vieillie et brûlée par le temps, certaines inscriptions ont subsisté par endroits. Des fragments que j'ai pu lire, il résulte que la peinture représente un assemblage d'images adorées dans l'Inde. Soit que le peintre ait travaillé d'après des documents rapportés de l'Inde, soit qu'il ait lui-même, au cours d'un pèlerinage, copié sur place ses modèles, le caractère indo-grec s'est conservé à travers le dessin chinois de telle manière que sa fidélité ne peut faire l'ombre d'un doute.

À côté de certaines des figures, l'inscription a, au moins en partie, subsisté ; elle permet d'identifier le lieu dans lequel était adorée l'image sacrée. Mais d'autres restent sans inscription et sont même en partie détruites. Parmi ces dernières, il est une composition dans laquelle un assistant seul a subsisté. C'est le Bodhisattva du soleil. Il devait avoir pour compagnon le Bodhisattva de la lune et tous deux se trouvaient de part et d'autre d'une figure centrale. À côté du Bodhisattva du soleil, il en subsiste assez pour démontrer la présence de la figure centrale. Or, si nous en croyons les peintures de Touen-houang, cette figure centrale ne pourrait être autre qu'Avalokiteçvara et nous aurions ici un *maṇḍala* du Bodhisattva de Miséricorde.

Cela peut faire remonter jusqu'en Inde l'origine des *maṇḍalas* dans ses dispositions caractéristiques, telles qu'elles nous apparaissent sous une forme définitive à Touen-houang. Ce n'est plus en effet les représentations

[8] On désigne ainsi le vœu initial qui ouvre la carrière d'un Bodhisattva.

[9] Fragment d'un Paradis d'Avalokiteçvara.

[10] Fragments d'un Paradis d'Avalokiteçvara aux onze têtes et aux mille bras.

[11] Idem.

[12] [See above, p. 1336, for correct date.]

que l'on trouve sur les bas-reliefs gandhāriens [13], mais bien le *maṇḍala* dans ce qu'il a d'essentiel. Pourtant, il est difficile sur un document unique et mutilé d'appuyer sans réserves une semblable conclusion. On ne peut que signaler son intérêt et attendre de l'avenir une confirmation nécessaire.

Pourtant, à y regarder de près, d'autres documents, qui remontent au Vᵉ siècle, nous montrent que l'ordonnance du *maṇḍala* était déjà fixée à cette époque : ce sont certaines des sculptures des grottes de Yun-kang et de Long-men ainsi que ces sortes de stèles sculptées sur leurs quatre faces, si fréquentes à l'époque des Wei et des T'ang et qui ont gardé en Chine et au Japon l'appellation bien caractéristique de 四面像, 'Images à quatre faces.' Je me permets de renvoyer le lecteur au dernier chapitre de ce travail où je reprendrai la question d'une manière plus utile, les comparaisons nécessaires ne pouvant logiquement se faire qu'après l'étude détaillée des *maṇḍalas* de Touen-houang. Il doit suffire de retenir ici les éléments de fait relatifs à la date et l'on peut voir dès à présent qu'ils doivent nous conduire à placer très près des dernières manifestations de l'art gandhārien le développement iconographique des *maṇḍalas*. Il n'est pas aventuré d'y reconnaître l'effet des influences de l'Asie antérieure, des traditions éparses dans la Perse sassanide et la Bactriane conduisant le bouddhisme en marche vers ses hautes destinées asiatiques à se constituer un panthéon qui semble avoir surgi sur les mêmes données que le Panthéon chrétien et en même temps que lui.

II

Caractères généraux des Maṇḍalas.

Tous ceux qui se sont quelque peu occupés d'art bouddhique connaissent ces représentations fastueuses de la Sukhāvatī où l'on voit Amitābha trônant dans son Paradis d'occident, entouré de Bodhisattvas et regardant éclore dans le cœur des fleurs de lotus les âmes libérées, les âmes toutes blanches qui ont obtenu de renaître dans la Terre de Pureté.

Le prototype de cette composition dérive d'une peinture introduite au Japon vers le milieu du VIIIᵉ siècle ; copiée à plusieurs reprises, elle nous est connue par l'original même, conservé au temple de Taima ainsi que par de nombreuses répliques dont les plus anciennes paraissent pouvoir remonter au Xᵉ ou au XIᵉ siècle, tandis que les plus récentes appartiennent au XVIIᵉ et au XVIIIᵉ. Dans la partie centrale, on voit se développer la représentation du Paradis d'occident, tandis que sur les deux bandes marginales, de part et d'autre de la peinture, on aperçoit une série de scènes qui, sur certaines répliques, sont accompagnées d'inscriptions. Elles traitent de l'histoire d'Ajātaçatru et de Bimbisāra.

Cette vieille peinture nous montre une ordonnance que nous retrouvons toute pareille aussi bien sur les fresques de Touen-houang que dans les peintures rapportées par la Mission Stein. Nous n'avons pas lieu de nous en étonner, car nous y avions constaté déjà cette abondance d'invention et ce mélange d'influences caractéristiques de l'art bouddhique dans le Turkestan oriental. Le motif, sans doute constitué en plein Turkestan, a gagné la Chine et le Japon où il s'est maintenu fidèlement. Mais quand, dans cette même

[13] Certaines figurations gandhāriennes présentent, en effet, la disposition caractéristique des *maṇḍalas*. Je laisse de côté l'usage de placer à côté du Buddha Çākyamuni des assistants qui, à droite et à gauche, interviennent pour équilibrer la composition et exprimer le détail d'une scène tandis que, parfois, apparaissent en haut du bas-relief des devas jetant des fleurs. Ce n'est pas à une ressemblance superficielle qu'il faut s'arrêter. Mais je retiendrai plus spécialement les figurations du Bodhisattva méditant dans le ciel des Tushitas ou la Prédication aux dieux Trayastriṃças. Là, en effet, on a, dans la sculpture gandhārienne, l'évocation d'un paradis. Dans un bas-relief du Musée de Lahore (M. Foucher, l'*Art gréco-bouddhique du Gandhâra*, fig. 145, p. 286) on voit le futur Buddha méditer sur un trône lotiforme, entouré de dieux distribués sur deux rangées suivant un système qui rappelle les Paradis à ordonnance réduite de Touen-houang. Ailleurs, dans la prédication aux dieux Trayastriṃças on a aussi l'évocation d'un paradis (M. Foucher, ibid., fig. 243, p. 485). Ici, le Buddha, assis sur un trône, siège sous un de ces arbres paradisiaques qui représentent, dans les peintures, les célestes bosquets de la tradition septentrionale. Il siège entre Indra et Brahmā. Au-dessus d'eux, on voit, à sa droite, un Vajrapāṇi, à sa gauche un deva. En haut, enfin, de chaque côté du feuillage de 'l'arbre précieux', des devas jettent des fleurs. On a ici, plus étroite encore, l'ordonnance essentielle des *maṇḍalas* du bouddhisme du Nord. Si ces évocations des Paradis bouddhiques n'ont pris place dans les bas-reliefs gandhāriens qu'à la faveur de la vie du Buddha Çākyamuni, dont elles représentent des épisodes, au moins pouvons-nous y voir comment, dès le premier abord, se sont fixées des ordonnances que l'école du Nord a ensuite développées d'une façon somptueuse. Il n'en reste pas moins que ce sont, pour ainsi dire, des *maṇḍalas* de rencontre. Toute autre serait la question si le *maṇḍala* supposé d'Avalokiteçvara (Ch. xxii. 0023, Pl. LXX) nous avait été entièrement conservé.

composition grandiose, les peintures de Touen-houang nous montrent des Buddhas et des Bodhisattvas que nous n'avions point jusqu'à présent aperçus dans cette magnificence, nous devons constater qu'au cours de ce long voyage bien des légendes, bien des images se sont perdues. Touen-houang nous livre l'iconographie bouddhique précisément au moment où elle était la plus abondante et la plus somptueuse.

Nous voyons donc dès le premier abord les éléments nouveaux que nous aurons à déterminer. L'iconographie bouddhique nous apparaît aussi plus riche, plus variée, plus étendue qu'on ne le pouvait croire. Des divinités diverses surgissent tour à tour offrant à l'imagination de leurs fidèles une image également somptueuse d'un pouvoir égal. Historiques ou fabuleux Buddhas et Bodhisattvas rivalisent en faste et en magnificence. Si Amitābha, tout rayonnant de ces influences lointaines qui mêlèrent au dieu perse du soleil la poésie des croyances bouddhiques, devait vaincre ces rivaux d'une heure, il n'en est pas moins vrai qu'un jour fut où ceux-ci l'égalèrent. Avant de les étudier séparément, il convient de déterminer les caractères de leurs Paradis, tels qu'ils nous apparaissent dans les peintures. Communs ou divers, ils définissent le cadre dans lequel nous aurons à rechercher des déterminations iconographiques. Avant de regarder les statues qui se dressent dans ce temple, il convient d'étudier l'édifice dans lequel elles sont enfermées.

L'ordonnance générale est à peu près la même. Le Buddha ou le Bodhisattva figure dans la partie centrale de la peinture, entouré de deux Bodhisattvas assistants qui se tiennent de part et d'autre. La figure centrale est parfois accompagnée de deux figures de prêtres à crâne rasé. Les Bodhisattvas assistants peuvent eux-mêmes être assistés de deux figures de prêtres ou de deux Bodhisattvas assistants. Au-dessus des figures centrales se déploient les parasols à plusieurs étages, les dais précieux, les arbres précieux autour desquels volent des figures d'apsaras. Dans certains *maṇḍalas* à la composition la plus large, les coins du haut sont occupés par des figures de Buddhas ou de Bodhisattvas, tandis qu'aux coins du bas gesticulent parfois des figures de Kin-kang (Vajrapāṇi). La scène qui se développe dans le corps de la peinture obéit à peu près toujours aux mêmes règles. Çà et là sont épars les édifices qui représentent les palais paradisiaques. Ce sont des édifices construits sur le plan des palais chinois, avec une ornementation chinoise. Tandis que le costume des Buddhas, des Bodhisattvas et de leurs assistants est resté purement indien, l'architecture de leurs paradis est devenue purement chinoise. Et cela seul suffirait à montrer sous quelles influences vigoureuses et diverses s'est constituée cette large iconographie bouddhique qui a donné à l'art religieux de l'Extrême-Orient un aspect si particulier.

Tous ces édifices s'élèvent sur des plateformes de bois construites sur pilotis. Un fleuve d'or coule dans les Paradis bouddhiques, parsemé de fleurs de lotus dans lesquelles renaissent les âmes purifiées qui ont échappé au cycle des renaissances. Souvent, sur une large plateforme ménagée devant la figure centrale, une apsaras danse, accompagnée par des anges musiciens rangés en ligne de part et d'autre.

De part et d'autre du tableau, deux bandes marginales se développent parfois. Elles sont découpées en une série de carrés, dans lesquels sont figurées des scènes accompagnées d'inscriptions. Souvent l'espace aménagé pour l'inscription n'a pas été rempli. Quelquefois la peinture a été achevée jusqu'au bout y compris les inscriptions. Comme les scènes sont toujours les mêmes, il suffit heureusement de tomber sur un exemplaire de ce genre pour pouvoir identifier tous les autres. Ces scènes marginales se rapportent toujours à l'illustration d'un sūtra où le Buddha ou le Bodhisattva représentés jouent un rôle prédominant.

Parfois, cependant, le peintre a négligé de diviser ainsi le tableau en compartiments divers. Les scènes marginales rentrent dans la composition même. Elles sont éparpillées aux endroits les moins chargés, sur les côtés, en haut et en bas. Au premier abord, elles semblent faire corps avec elle; parfois des inscriptions les accompagnent. C'est ainsi que l'on peut déterminer leur valeur et leur signification là où les inscriptions font défaut.

Tels sont les caractères généraux des *maṇḍalas* de Touen-houang. Il convient d'ajouter qu'ils sont les mêmes pour toutes les représentations de Paradis, depuis le Turkestan oriental jusqu'au Japon. Le type de la composition a donc bien été fixé une fois pour toutes dans l'histoire de l'art bouddhique.

Cette ordonnance subit parfois des réductions. Les donateurs n'étaient pas toujours assez riches, les peintres religieux n'étaient pas toujours assez habiles ou assez instruits pour commander ou pour exécuter des tableaux de cette importance. On voit alors, suivant les circonstances, les Paradis diminuer d'ampleur. Les édifices fabuleux disparaissent en grande partie; les riches balustrades construites sur les fleuves mythiques ne sont plus qu'un simple ornement; les Bodhisattvas assistants ne sont plus en si grand nombre, les apsaras et les devas jouant de la musique et dansant disparaissent, ainsi que les scènes marginales. L'économie s'introduit partout et elle en arrive à la fin à ne plus laisser qu'une représentation d'un Buddha ou d'un Bodhisattva

flanqué de deux assistants. À ce moment, ce n'est plus un *maṇḍala*. Nous aurons à suivre pas à pas les divers degrés de cette simplification jusqu'au moment où le type de la peinture n'appartient plus qu'à la représentation d'une divinité isolée et sort du cadre de la présente étude.

Nous ne pouvons cependant terminer cette sorte d'introduction aux différents types de *maṇḍalas* sans insister sur un fait digne de remarque. Ce qui est vrai pour les Paradis des divers Buddhas ou Bodhisattvas ne l'est plus toujours pour certains d'entre eux. Certains *maṇḍalas* d'Avalokiteçvara et ceux de Kshitigarbha prennent, en effet, un aspect tout particulier. On ne saurait les confondre à aucun point de vue avec les représentations des autres Paradis bouddhiques. Leur individualité est tellement accusée qu'ils méritent de demeurer à part. Afin de ne point recommencer deux fois un exposé qui sera à sa place lorsque je traiterai des *maṇḍalas* des Bodhisattvas, il me suffira d'indiquer ici ce cas particulier et de renvoyer le lecteur à l'un des suivants chapitres pour y trouver de plus amples éclaircissements.

III

Caractères particuliers des Maṇḍalas.

Nous abordons maintenant l'étude particulière des *maṇḍalas*. Elle sera divisée, comme le commande la conception bouddhique elle-même, en deux parties, l'une consacrée aux Buddhas, l'autre consacrée aux Bodhisattvas. Nous commencerons tout d'abord par le *maṇḍala* le plus connu, tout au moins sous son aspect général, car il n'a pas été, que je sache, jusqu'à ce jour, l'objet d'une étude particulière: c'est le *maṇḍala* d'Amitābha ou la représentation du Paradis d'Occident. Nous aurons ensuite à étudier trois autres types de Paradis: ceux de Maitreya, de Bhaishajyaguru et de Çākyamuni. Le premier et le dernier se présentent sous un aspect nouveau pour nous, et leur découverte apparaîtra comme tout à fait inattendue à ceux qui croyaient posséder avec l'iconographie japonaise, chinoise et tibétaine, l'entièreté des représentations bouddhiques. Quant au Paradis de Bhaishajyaguru, s'il apparaît au Tibet, c'est dans une forme plus simple et en tout cas fort différente, car il s'y surcharge de figurations tantriques. On voit donc que l'étude de nos matériaux doit nous conduire à nombre de conclusions nouvelles.

Quant aux Bodhisattvas en cause, ce sont Kshitigarbha et Avalokiteçvara. Kshitigarbha, sous la forme du prêtre au crâne rasé, portant le sistre et le *maṇi*, parfois la tête recouverte du châle des pèlerins, ne nous était connu qu'au Japon. Il deviendra évident que, sous la forme japonaise, nous ne connaissions qu'un débris d'une divinité qui eut, dans le Turkestan oriental, son heure de magnificence. Quant à Kouan-yin, nombreuses sont les formes sous lesquelles elle nous apparaît aussi bien au Tibet qu'en Chine et au Japon. Cependant, malgré la grande variété de ses types et la richesse de son iconographie, ce Bodhisattva rayonne à Touen-houang d'une telle gloire qu'il surpasse de beaucoup tout ce que nous en pouvions connaître. Il rivalise avec Amitābha lui-même dans la faveur du culte, et, dans l'éclat de ses apparences, il a pris une forme matérielle plus riche et plus sûre que son propre Dhyāni-Buddha. Quand j'ajouterai enfin que les documents de Touen-houang nous livrent la source des représentations tibétaines du Paradis d'Avalokiteçvara, j'aurai indiqué la dernière, mais non pas la moins intéressante, des conclusions auxquelles nous conduira notre étude.

IV

Les Maṇḍalas d'Amitābha.

Les *maṇḍalas* d'Amitābha sont ceux qui correspondent le plus étroitement aux indications que nous avons données ci-dessus sur les caractères généraux des représentations des Paradis bouddhiques. Le trésor de Touen-houang contient trois peintures importantes représentant un *maṇḍala* d'Amitābha dans sa plus large ordonnance. Toutes trois sont accompagnées des deux bandes marginales dans lesquelles sont représentées les scènes de la vie d'Ajātaçatru et de Bimbisāra. Aucune des trois ne comporte les inscriptions relatives. Nous serons donc obligé, pour déterminer ces scènes, d'avoir recours aux documents japonais. Ces trois peintures portent dans l'inventaire de Sir Aurel Stein les cotes suivantes: Ch. v. 001; lv. 0033; lvi. 0018. Chacune présente des variantes intéressantes, je les signalerai en passant.

L'ordonnance générale est celle que j'ai indiquée plus haut; des palais à architecture purement chinoise garnissent la partie supérieure du tableau; personnages et édifices sont placés sur une plateforme montée sur pilotis et au-dessous de laquelle coule le fleuve d'or du Paradis d'Occident. Amitābha siège au milieu, sur un trône en forme de fleurs de lotus. Il est assisté de deux Bodhisattvas qui sont comme on le sait Mahāsthāma

à droite et Avalokiteçvara à gauche,[14] les Kwannon et Seichi de la Triade japonaise. Ces deux Bodhisattvas sont eux mêmes flanqués à droite et à gauche de deux Bodhisattvas qui restent indéterminés. Sur la peinture lv. 0033, un autel est placé devant Amitābha. Des Bodhisattvas se tiennent de part et d'autre de l'autel et, sur un espace libre, une apsaras danse, accompagnée par des anges musiciens. Tout en bas de la peinture on voit, à droite et à gauche, derrière un autel dressé devant eux, Amitābha assisté d'Avalokiteçvara et de Mahāsthāma, dans des actes divers de sa prédication.

Ces dernières figurations se retrouvent sur tous les *maṇḍalas* à large ordonnance de Touen-houang. Elles prouvent à toute évidence qu'il faut renoncer à ce principe généralement accepté en iconographie bouddhique qu'un Buddha n'est jamais répété dans la même peinture. J'ignore, du reste, sur quelle source, probablement tardive, on s'est fondé pour une semblable affirmation. Loin d'être une exception, cette adjonction d'une représentation symétrique du Buddha principal dans la partie inférieure de la peinture est presque une règle. On la retrouve en effet, comme on le verra plus loin, sur des *maṇḍalas* consacrés à d'autres Buddhas. J'ajoute enfin que ces figures de Buddhas se répétant, associées à elles-mêmes, ne sont pas inconnues en Inde. Je n'en veux pour preuve que l'exemple cité par M. A. Foucher où, par deux fois, on retrouve un Buddha enseignant flanqué, en guise d'assistants, de deux autres lui-même.[15]

De part et d'autre de la figure centrale d'Amitābha et derrière lui deux assistants au crâne rasé portent le costume du prêtre. Un plan de *maṇḍala* provenant de Touen-houang et classifié sous la cote Ch. 00186 nous permet de les identifier. Car, s'il n'indique la figure centrale que par le caractère 佛, en nous donnant comme assistants Mahāsthāma et Avalokiteçvara, il nous permet d'identifier le Buddha central et de reconnaître dans ce croquis le plan d'un *maṇḍala* d'Amitābha. Or, les deux figures qui se trouvent derrière le Buddha central sont désignées comme Bhaishajyasamudgata à sa droite et Bhaishajyarāja à sa gauche, réincarnations respectives de Vimalanetra et de Vimalagarbha. Il faut noter en outre que ce précieux plan de *maṇḍala* comporte aussi les quatre Rois des quatre points cardinaux ; nous ne les retrouvons pas dans ces peintures. Ces prêtres au crâne rasé se retrouvent dans les autres *maṇḍalas* d'Amitābha, aussi bien dans la peinture lvi. 0018, en plus mauvais état que la précédente, mais mieux peinte. Tandis que la peinture lv. 0033 a tous les caractères de la peinture bouddhique chinoise des T'ang, celle-ci comporte une composition plus aisée. Les figures sont moins figées dans leurs attitudes, les deux Bodhisattvas assistants s'inclinent dans un geste gracieux et le caractère plus indien des chignons, des vêtements et des bijoux donne à ce *maṇḍala* une valeur artistique toute différente. Il est, malheureusement, en assez mauvais état. La peinture Ch. v. 001 présente cette particularité que Mahāsthāma et Avalokiteçvara ne sont point accompagnés de Bodhisattvas assistants. Bhaishajyasamudgata et Bhaishajyarāja figurent tous deux à la droite et à la gauche d'Amitābha. Mais tous, prêtres ou Bodhisattvas, présentent ce caractère particulier aux peintures à inscriptions sino-tibétaines de Touen-houang. Elles révèlent un style et des tendances bien diverses des deux autres *maṇḍalas* étudiés en premier lieu.

Nous arrivons maintenant à d'autres peintures qui nous montrent des compositions plus réduites. L'une d'elles (Ch. 0051) est encore munie, comme les précédentes, de ces scènes marginales. On voit se dresser à la partie supérieure du tableau les palais paradisiaques ; dans la partie inférieure, incomplète, on voit se répéter deux fois Amitābha accompagné de ses deux assistants. Sur la plateforme, devant l'autel que domine Amitābha, une apsaras danse, mais elle est accompagnée de quatre musiciens seulement. Deux Bodhisattvas sont en adoration de part et d'autre de l'autel ; quatre autres sont rangés le long de la balustrade ; enfin, dans la partie centrale, les grandes figures d'Amitābha, de Mahāsthāma et d'Avalokiteçvara apparaissent. Amitābha est flanqué de deux prêtres dans lesquels nous reconnaissons Bhaishajyasamudgata et Bhaishajyarāja ; mais aucun des deux grands Bodhisattvas qui accompagnent Amitābha n'a d'assistants. Il y a une réduction très notable dans le nombre des personnages ; tout a quelque chose de plus serré et de plus concis, quoique, cependant, les éléments essentiels qui animaient les larges compositions précédentes s'y retrouvent tous. D'autre part, cette peinture présente ce caractère particulier et ce style propre aux tableaux à inscriptions sino-tibétaines de Touen-houang.

Une autre (xlvii. 001 ; *Th. B.*, Pl. XI) a, au contraire, le style propre à l'époque des T'ang. Les figures sont arrondies, plus lourdes, le modelé des chairs est obtenu au moyen d'un lavis rouge. La peinture est dépourvue de

[14] Cette disposition n'est pas toujours respectée. Il arrive que, dans la triade d'Amitābha, Mahāsthāma et Avalokiteçvara, la position des assistants soit intervertie. Cependant leur place correcte est pour Avalokiteçvara à gauche, pour Mahāsthāma à droite.

[15] A. Foucher, *Étude sur l'Iconographie bouddhique de l'Inde*, i. 161–2, et fig. 28 et 29.

scènes marginales. Les palais paradisiaques ont disparu. Amitābha se dresse parmi les arbres aux fruits précieux qui jaillissent de son trône de lotus, mais il n'est pas assisté par Bhaishajyarāja et Bhaishajyasamudgata. Seuls auprès de lui Mahāsthāma et Avalokiteçvara sont assis sur le lotus, entre deux assistants debout. Sur la plate-forme où dansait l'apsaras, il ne reste plus que l'autel avec ses deux orants; deux Bodhisattvas en avant de la balustrade planent assis sur des fleurs de lotus, accompagnés de deux assistants et suivis d'un troisième. Des petits enfants en prière représentent les âmes qui renaissent dans le Paradis d'Occident. Elles sont accompagnées d'inscriptions qui précisent chacune des trois classes à laquelle ils appartiennent. Tout en bas, une porte indique l'entrée du Paradis et, parmi des enfants jouants, une petite figure de donatrice apparaît, agenouillée sur un tapis tandis que deux donateurs lui font face.

Enfin, chose nouvelle pour nous, mais que nous retrouverons dans d'autres *maṇḍalas*, tout en haut, dans les coins de droite et de gauche, un petit Buddha apparaît, symbolisant, comme nous le verrons plus loin, tous les Buddhas des trois mondes et des dix directions.

On a des réductions plus marquées encore des grandes compositions originales. J'en reproduis une (Ch. lii. 004) qui vaut d'être retenue parce que, dans sa réduction même, elle présente des caractères originaux. Amitābha est accompagné des deux prêtres, Bhaishajyasamudgata et Bhaishajyarāja. Mais l'un d'entre eux a des chairs rouge vif tandis que l'autre a des chairs roses et blanches. L'un a l'expression terrible, l'autre l'expression bénigne. À ce moment, à leur qualité particulière, ils ajoutent cette qualité générale de représenter l'esprit terrible et l'esprit bénin des manifestations de la figure centrale. Je reprendrai dans un chapitre spécial l'étude de ce point spécial. Je me contente de le signaler ici en passant.

Amitābha est assisté de Mahāsthāma et d'Avalokiteçvara; ceux-ci sont seuls, sans assistants; au-devant d'Amitābha se trouve un autel flanqué des deux Bodhisattvas orants. En bas deux Bodhisattvas qui de part et d'autre complètent la figuration, faisant d'une main la *mudrā* de l'enseignement, tenant de l'autre une fleur de lotus, semblent bien être la Kouan-yin au lotus. Ceci nous permet d'identifier sous le même nom les deux Bodhisattvas, munis d'assistants, qui se trouvent au bas du *maṇḍala* à ordonnance réduite décrit plus haut et classifié sous la cote xlvii. 001. Quant aux *maṇḍalas* à large ordonnance, la figuration y est trop nombreuse et trop variée pour qu'il soit possible d'identifier les Bodhisattvas qui entourent les figures principales.

Cependant, la peinture que nous étudions en ce moment a aussi quelque chose de plus. Tout au bord, derrière Mahāsthāma et Avalokiteçvara, on voit la représentation de deux des quatre rois. Au fond, une ligne de montagnes surmontées d'arbres vient marquer la limite qui sépare les régions paradisiaques des continents terrestres et où s'exerce l'action protectrice des Catur-Mahārājas. Si nous recourons une fois de plus au petit plan manuscrit de *maṇḍala* (Ch. 00186) dont j'ai déjà fait usage plus haut, nous verrons que, à la droite d'Amitābha, derrière Mahāsthāma, se trouve Virūḍhaka, Roi du Sud, et à sa gauche, derrière Avalokiteçvara, Vaiçravaṇa, Roi du Nord. Ainsi donc, tandis que les *maṇḍalas* à large ordonnance de Touen-houang ne nous offraient aucun exemple de la présence des quatre Rois des quatre points cardinaux, indiqués par le plan manuscrit, voici un *maṇḍala* à ordonnance réduite qui vient, au moins en partie, combler cette lacune et confirmer l'ordonnance complète du plan manuscrit auquel nous devons l'identification de Bhaishajyasamudgata et de Bhaishajyarāja.

Nous retrouvons du reste les quatre Rois des quatre points cardinaux au grand complet sur un *maṇḍala* à composition réduite (xlvi. 008) où Amitābha est entouré seulement de Mahāsthāma, d'Avalokiteçvara et deux orants. La distribution de notre plan manuscrit se trouve donc pleinement confirmée par les documents iconographiques.

J'ai parlé plus haut, à propos de la peinture Ch. lii. 004 (Pl. LXII), de la transformation de Bhaishajyarāja et de Bhaishajyasamudgata en génies bénin et terrible d'Amitābha. Il est une peinture, *maṇḍala* à ordonnance plus réduite encore et de caractère particulier, qui soulève à nouveau cette question. Elle est cotée au British Museum sous le chiffre Ch. liii. 001 (*Th. B.*, Pl. X).

Au centre, sur un trône de fleur de lotus, figure Amitābha. Le dais est soutenu par des arbres paradisiaques aux fruits précieux. Il est assisté de Mahāsthāma, d'Avalokiteçvara et de deux orants. Au bas, on voit la porte du Paradis. Dans le coin de droite une donatrice portant un costume à la mode du début des T'ang; le coin de gauche qui devait porter les donateurs est détruit. Mais la particularité de cette peinture réside en ce fait que, si Amitābha est assisté de ses deux figures de prêtres, Mahāsthāma et Avalokiteçvara ont les mêmes assistants.

Comment interpréter dans ce cas, en dehors de Bhaishajyarāja et de Bhaishajyasamudgata, les autres figures

de prêtres ? Je n'y vois d'autre explication que celle-ci : Avalokiteçvara et Mahāsthāma sont aussi accompagnés de leurs génies bénins et terribles. Pour Avalokiteçvara cependant, on peut aller plus loin dans l'identification, car, dans un *mandala* sur lequel je reviendrai plus loin (Ch. 00102, Pl. LX) nous retrouvons ces personnages désignés, celui de gauche sous le nom de 舍利佛, Çāriputra, et celui de droite sous le nom de 須菩提, Subhūti (v. inf., 44-46). Le premier a la forme bénigne, le second, la forme terrible, qui se traduit dans la couleur du visage peint en rouge.

Nous avons eu dans cette peinture l'une des formes les plus réduites du *mandala*. Une autre, Ch. i. 0014, de la classification de Sir Aurel Stein, nous en montre la forme la plus simple. Amitābha siège au centre, entre Mahāsthāma à droite et Avalokiteçvara à gauche. Devant lui un autel flanqué de deux Bodhisattvas orants ; dans la partie inférieure de la peinture sont les donateurs. Il n'y a pas de forme plus réduite de *mandala*. Si l'on supprime l'autel et les deux orants, on n'a plus que la fameuse triade japonaise d'Amida, de Kwannon et de Seichi. À ce moment, le Buddha n'apparaît plus flanqué de ses deux assistants, que comme une représentation isolée ; plus rien ne rappelle la composition des *mandalas* à large ordonnance ; et les peintures de ce genre, outre qu'elles comportent des éléments bien connus et facilement déterminables, échappent à notre sujet.

[Indication pour l'introduction d'un long développement dont la rédaction est restée en suspens.]

V

Le Mandala de Maitreya.

Il n'y a qu'un seul *mandala* de Maitreya (Ch. lviii. 001, Pl. LVIII ; *Th. B.*, Pl. IX) parmi toutes les peintures rapportées de Touen-houang par Sir Aurel Stein. D'autre part, le fait qu'une seule peinture de Buddha isolé apparaît, par sa *mudrā* très caractéristique, toute pareille à celle du *mandala*, comme un Maitreya, démontre que son rôle est resté limité. Dans les deux cas, il se présente du reste, non sous la forme du Bodhisattva, mais sous celle du Buddha. C'est pourquoi je l'étudie ici, parmi les *mandalas* des Buddhas, suivant en cela les indications singulières, mais péremptoires, des documents.

La représentation de Maitreya sous la forme d'un Buddha n'est pas inconnue, mais elle est assez rare. Je crois bien au surplus, que l'on a ici la première représentation de son *mandala*. Maitreya, sous l'aspect du Buddha, ne se présente que deux fois dans l'ensemble de plus de quatre cents peintures que comporte la collection de la Mission Stein. Dans une autre occasion où il est nommément désigné, sur la peinture xx. 004 où figure aussi une Kouan-yin, il est représenté sous la forme d'un Bodhisattva. Il a fallu probablement toute l'hétérodoxie du Turkestan oriental pour nous livrer des peintures où le Buddha futur est représenté sous la forme d'un Buddha parfait et où il règne, sous cette forme, dans son Paradis qui, si nous en croyons les données du bouddhisme, ne peut être que le ciel des Tushitas. Si cette représentation est rarissime, il n'en est pas moins vrai qu'elle existe. C'est encore un des principes sacro-saints de l'iconographie bouddhique qui disparaît.

Le *mandala* de Maitreya (Ch. lviii. 001) se présente sous le même aspect général que celui d'Amitābha. Au centre, sous la forme d'un Buddha au corps jaune d'or, siège le Buddha futur. De la main droite, il fait le geste de l'enseignement. Il est accompagné de deux Bodhisattvas assistants. Il a, à droite, un génie bénin ; à sa gauche, un génie terrible. Tous deux nous apparaissent sous la forme du prêtre ; le bénin a une figure jeune, ronde et pleine ; le terrible une figure vieillie et grimaçante et un teint rouge vif. Devant Maitreya se dresse un autel, avec, de part et d'autre, deux Bodhisattvas porteurs d'offrandes. Sur la plateforme, au-devant de l'autel, une apsaras danse, accompagnée d'anges musiciens. Dans l'eau, debout sur des lotus, deux enfants aux mains jointes représentent les âmes renaissantes. Puis, toujours sur la plateforme à la riche balustrade, au-dessous de laquelle coulent les eaux du fleuve paradisiaque, de part et d'autre du tableau, nous retrouvons Maitreya, toujours sous la forme du Buddha, faisant de la main droite le geste de l'enseignement ; il siège derrière un autel et il est accompagné de deux Bodhisattvas aux mains jointes. Nous aurions à répéter ici ce que nous avons dit à propos du *mandala* d'Amitābha sur l'habitude qu'avaient les peintres bouddhiques du Turkestan oriental de répéter la figure du Buddha central dans les compositions à large ordonnance des *mandalas*.

Mais, outre les génies bénins et terribles, quatre autres figures garnissent la partie supérieure du tableau. C'est : à la gauche de Maitreya, le Roi du Nord, Vaiçravaṇa ; à sa droite, le Roi du Sud, Virūḍhaka ; chacun d'eux est accompagné non pas des deux autres rois des points cardinaux, mais d'un porteur du foudre, d'un de ces Vajrapāṇi que, sous la forme des Miō-ō, on retrouve comme gardiens des portes à l'entrée des temples japonais. Ce sont le 那羅延堅固, Na-lo-yen-kien-kou (Nārāyaṇa-sāra) et le 密迹金剛 Mi-tchö

kin-kang (Guhya-pratishedha-vajra ?) de l'ancienne tradition chinoise des T'ang, recueillie par Kōbō-Daishi.[16] Ils apparaissent ici comme les assistants et les subordonnés des rois des quatre points cardinaux.

Telle est la partie essentielle du *maṇḍala* de Maitreya ; on voit que la composition suit d'assez près les règles générales des tableaux de ce genre. Mais, en haut et en bas du tableau se développent ces scènes qui sur les *maṇḍalas* d'Amitābha étaient rejetées sur les marges. Nous avons ici un exemple de leur incorporation à la peinture même. Elles sont accompagnées des inscriptions qui permettent de les déterminer et qui mettent hors de doute la détermination de cette peinture et son attribution à Maitreya. Les inscriptions, en effet, sont empruntées au *Maitreya-vyākaraṇa-sūtra*. [Le développement s'arrête court.]

VI

Le Maṇḍala de Bhaishajyaguru.

Le *maṇḍala* de Bhaishajyaguru (Ch. lii. 003, Pl. LVII ; *Th. B.*, Pl. I, II, et Ch. liii. 002, Pl. LVI) se trouve à deux exemplaires dans la série des peintures de Touen-houang ; l'une de ces peintures constitue une œuvre d'une grande finesse, comportant une composition variée et originale. C'est à celle-ci que je m'attacherai. Le Buddha de Médecine occupe la partie centrale, il porte une robe rouge, il a le teint couleur d'or et il tient le *pātra* posé sur la main étendue dans son giron. Il n'est pas nécessaire de sortir des documents de Touen-houang pour identifier ses Bodhisattvas assistants. Une peinture à inscription (Ch. 00224) nous apprend que ce sont : à la gauche de la figure centrale, Mañjuçrī ; à sa droite, Samantabhadra. Devant Bhaishajyaguru, nous retrouvons l'autel flanqué des deux Bodhisattvas porteurs d'offrandes. Derrière lui, parmi les nombreux Bodhisattvas qui l'accompagnent, pourrait-on reconnaître le génie bénin et le génie terrible ? Aucun signe extérieur ne permet de les désigner.[17] Cependant, sur la peinture Ch. liii. 002, ces quatre assistants sont des prêtres. Comme dans tous les *maṇḍalas* que nous avons vus jusqu'à présent, devant l'autel, sur une plateforme qui s'avance au-dessus des eaux, une apsaras danse parmi des anges musiciens. Sur les deux côtés de la peinture (Ch. lii. 003), on voit aussi, comme sur les *maṇḍalas* d'Amitābha et de Maitreya, se répéter la figure du Buddha central. Mais ici, Bhaishajyaguru est debout entre deux Bodhisattvas porteurs d'offrandes. De nombreux Bodhisattvas aux attitudes variées, aux gestes souples et au corps fin sont assis çà et là. Les palais et les arbres se groupent en un équilibre harmonieux ; mais sur deux plateformes qui s'avancent sur les deux côtés de la composition et à la partie inférieure du tableau, on voit deux groupes de six personnages guerriers qui ne sont autres que les douze généraux de Bhaishajyaguru. Ils président, comme on sait, aux douze intervalles horaires. J'en donne ici la liste avec les diverses équivalences qu'indique la tradition : [18]

毘羯羅大將	correspond à une incarnation	de Çākyamuni	rat	子
招杜羅	„ „ „	de Vajrapāṇi	bœuf	丑
眞達	„ „ „	de Samantabhadra	tigre	寅
摩虎	„ „ „	de Bhaishajyaguru	lièvre	卯
波夷	„ „ „	de Mañjuçrī	dragon	辰
因達	„ „ „	de Kshitigarbha	serpent	巳
珊底	„ „ „	d'Ākāçagarbha	cheval	午
頞你	„ „ „	de Mārīci	bélier	未
安底	„ „ „	d'Avalokiteçvara	singe	申
迷企	„ „ „	d'Amitābha	coq	酉
伐折	„ „ „	de Mahāsthāma	chien	戌
宮毗	„ „ „	de Maitreya	porc	亥

Ces douze héros divins représentent les douze grands vœux du Buddha Bhaishajyaguru. Chacun d'eux gouverne sept mille Yakshas ; ce sont des protecteurs de la Religion. Leur présence ici nous montre Bhaishajyaguru dans son rôle de président des génies des heures. Dès lors, nous pouvons identifier les deux Bodhisattvas assistants qui se trouvent à sa droite et à sa gauche. Ce sont Sūryaprabha et Candraprabha qui, dans son

[16] Voir le *Butsuzō-zuï*, IV. 3 v°.

[17] Voir au chap. X l'examen détaillé de cette question.

[18] Voir le *Butsuzō-zuï*, IV. 1.

Paradis d'Orient, viennent tenir auprès de lui la place que Mahāsthāma et Avalokiteçvara occupent à côté d'Amitābha dans le Paradis d'Occident.

Mais ces figures n'épuisent pas les caractères nouveaux que présente le *maṇḍala* de Bhaishajyaguru. En bas, à droite et à gauche se trouvaient des représentations de Bodhisattvas accompagnés d'assistants, malheureusement trop mutilées pour que l'on puisse avancer la moindre identification. Mais, en haut de la peinture (Ch. lii. 003), deux Bodhisattvas qui en garnissent les coins supérieurs sont facilement reconnaissables. Ce sont, à gauche de la figure centrale, Mañjuçrī, reconnaissable à ses mille bras et aux mille bols qu'il tient dans ses mains innombrables et de chacun desquels surgit un Buddha ; à droite Avalokiteçvara aux mille bras, portant, parmi ses nombreux attributs, le soleil et la lune et tel qu'il nous apparaîtra tout à l'heure sur ses propres *maṇḍalas*.

Il n'est pas étonnant que le Paradis de Bhaishajyaguru-Buddha ressemble à celui d'Amitābha. Les descriptions du *Tripiṭaka* répètent les mêmes termes. L'un est situé à l'Ouest, l'autre à l'Est. Les murs du Paradis et ses palais sont faits des sept sortes de gemmes, le sol est d'or, la lumière qui y rayonne est d'or. Bhaishajyaguru lui-même a le corps couleur d'or.

Sur deux bandes marginales sont groupées diverses scènes illustrant la légende de Bhaishajyaguru. Certaines d'entre elles portent des inscriptions. Sur d'autres le cartouche réservé à l'écriture n'a pas été rempli. Sur d'autres il a été détruit en tout ou en partie. Il en reste assez cependant pour reconnaître que le texte appartient au 藥師瑠璃光如來本願功德經.[19]

Les scènes se rapportent toutes aux douze grands vœux de Bhaishajyaguru dans sa dernière réincarnation comme Bodhisattva. [Ici encore le développement semble écourté.]

VII

Les Maṇḍalas de Çākyamuni.

Les *maṇḍalas* de Çākyamuni ne sont pas aussi inattendus que ceux de Maitreya, car si nous n'avions de lui aucun *maṇḍala* peint, au moins avons-nous des exemples de *maṇḍalas* sculptés, qui, tous deux, datent de l'époque des Wei.[20]

Les documents de Touen-houang nous offrent deux *maṇḍalas* à large ordonnance, et un autre de la formule la plus réduite. Les deux premiers sont munis de scènes marginales ; l'un d'eux porte seul des inscriptions.

Étudions tout d'abord ce dernier. Il porte la cote liv. 004 (*Th. B.*, Pl. V) dans l'inventaire des documents de la Mission Stein. Son ordonnance générale se rapproche assez étroitement des *maṇḍalas* d'Amitābha. Le Buddha historique se dresse au centre de la peinture, entre deux Bodhisattvas que le *maṇḍala* à ordonnance réduite dont je parlerai tout à l'heure nous permet d'identifier en Kshitigarbha à gauche et Ākāçagarbha à droite. Devant le Buddha, un autel. Devant l'autel, l'apsaras dansante et les anges musiciens. Sur des lotus, des enfants agenouillés représentent les âmes renaissantes. En bas, des groupes de Bodhisattvas ; en haut, au-dessus des palais célestes, portés sur des nuages, quatre petits Buddhas qui, comme on l'a déjà vu, représentent les Buddhas des trois mondes et des dix côtés.

Çākyamuni n'est point répété dans la partie inférieure de la peinture et, quoiqu'elle soit mutilée, il ne semble pas que la composition ait comporté cette duplication qui, jusqu'ici, avait été la règle. D'autre part, le Bouddha central est assisté non point de deux, mais de quatre prêtres. Le *maṇḍala* à ordonnance réduite qui est heureusement muni d'inscriptions nous permet de déterminer deux d'entre eux avec précision : ce sont Çāriputra à gauche et Maudgalyāyana à droite. Quant aux deux autres, ce n'est pas trop s'aventurer que d'y reconnaître, sur la foi de nombreuses représentations figurées étrangères à Touen-houang, les images d'Ānanda et de Kāçyapa. Il convient de noter cependant que les deux premiers se confondent aussi avec les génies bénin et terrible du Buddha central. Je reviendrai plus loin sur ce point.

Le second *maṇḍala* (Ch. xxxviii. 004 ; *Th. B.*, Pl. VII) présente une ordonnance beaucoup plus originale. La peinture est complète et l'on voit la bande inférieure où sont groupés les donateurs. Çākyamuni siège au centre de la peinture, entre Kshitigarbha à gauche et Ākāçagarbha à droite. Devant lui se dresse l'autel flanqué de ses deux figures orantes. Une apsaras danse parmi des anges musiciens et c'est tout.

L'ordonnance générale est donc plus réduite que dans la peinture précédente et la figuration y est

[19] Traduction de Hiuan-tsang, *Tripiṭaka de Tōkyō*, xxv, 5, 38 et suiv. [La traduction en a été préparée par Petrucci].

[20] L'un a été publié par M. S. Taki dans le *Kokka*, nº 270, 1912 ; l'autre a été récemment étudié par M. Chavannes dans *Ars Asiatica*, II. chap. iii. Le premier date de 551, le second de 543.

certainement moins nombreuse. Au-dessus des palais paradisiaques on retrouve les quatre petits Buddhas planant sur des nuages. Mais ce qu'il y a de tout à fait imprévu, c'est la forme sous laquelle Çākyamuni se répète dans la partie inférieure de la composition. Il est assis sur une plateforme isolée, au milieu des eaux, il est assisté de deux Bodhisattvas, Ākāçagarbha à sa droite, à sa gauche Kshitigarbha, non point sous la forme d'un Bodhisattva à chignon, mais sous sa forme si particulière de prêtre au crâne rasé. Çākyamuni porte une représentation de la lune sur l'épaule droite, du soleil sur l'épaule gauche et du mont Meru sur le ventre. Des animaux fabuleux surgissent de part et d'autre, sur des îles qui se dressent au milieu de l'océan. Cette figuration du Buddha historique, sous une forme qui semble en faire l'incarnation même de la montagne fabuleuse qui supporte les cieux bouddhiques, méritait d'être particulièrement signalée. Elle a une valeur symbolique qui fait de Çākyamuni le libérateur des âmes et celui qui relie les Paradis mythiques à la terre. C'est jusqu'ici le seul document iconographique qui nous le révèle sous cet aspect.

J'ai déjà parlé à plusieurs reprises d'une peinture qui représentait un *maṇḍala* à ordonnance réduite de Çākyamuni. Elle porte la cote Ch. xxxiii. 001. Dans la partie inférieure sont représentés des donateurs. Les caractères du cartouche central sont à peu près entièrement effacés. Cependant, on peut y lire encore 釋 ○ 牟 尼 : Çā . muni ; ce qui met hors de doute l'identification du *maṇḍala*.

Heureusement les assistants du Buddha central sont clairement désignés. Çākyamuni est assis au-dessus d'un autel flanqué de deux orants. Il est assisté à droite d'Ākāçagarbha 虛 空 藏, à gauche de Kshitigarbha [*sic*], 寶 德. À droite, une figure de prêtre à l'aspect bénin est désignée sous le nom de Çāriputra ; à gauche, la figure de prêtre a l'aspect terrible, la chair rouge vif, et elle est désignée sous le nom de Maudgalyāyana. Cette peinture nous montre comment le caractère des esprits bénin et terrible du Buddha peut recouvrir des figures d'assistants dérivés de personnages historiques et qui n'ont rien à voir avec ces tendances tantriques.

Nous devons revenir maintenant sur le premier *maṇḍala* étudié pour en déterminer les scènes marginales. Les inscriptions et les scènes qui les accompagnent sont empruntées à trois histoires distinctes qui se retrouvent avec l'emploi des mêmes termes, mais sous une forme beaucoup plus développée dans le 大 方 便 報 恩 經.[21] [Ici le développement tourne court.]

VIII

Les Bodhisattvas. Les Maṇḍalas de Kouan-yin.

Les *maṇḍalas* de Kouan-yin, aussi bien, du reste, que ceux de Kshitigarbha vont se présenter sous une forme toute différente. Kouan-yin surtout se distingue des Buddhas aussi bien par l'ordonnance de ses *maṇḍalas* que par leur variété. Ils sont tels que le Bodhisattva de Pitié et de Miséricorde semble avoir joui auprès des Bouddhistes de la Chine occidentale et du Turkestan oriental d'une faveur toute spéciale. Pour les *maṇḍalas* comme pour les représentations isolées, les peintures consacrées à Kouan-yin, dans le Trésor de Touen-houang, prédominent d'une façon écrasante. Son individualité d'autre part s'accuse nettement. Elle rivalise, sans conteste, avec les Buddhas du bouddhisme du Nord ; elle les écrase de son pouvoir rédempteur, elle les surpasse de toute la grandeur des sentiments qu'elle évoque.

L'étude attentive des *maṇḍalas* de Kouan-yin m'a conduit à les diviser en quatre catégories. D'abord, les *maṇḍalas* de la Kouan-yin à onze têtes et à mille bras. Ce sont ceux qui, malgré leur individualité, se rapprochent le plus, par certains caractères de leur ordonnance générale, des *maṇḍalas* des Buddhas. Ensuite viennent les *maṇḍalas* où Kouan-yin, se répétant elle-même, nous apparaît en même temps sous diverses formes. Ensuite viennent les *maṇḍalas* d'Avalokiteçvara que je désigne sous le nom de 'la Kouan-yin aux miracles' et ici nous verrons les scènes marginales pénétrer dans le corps même de la peinture ; enfin la dernière section comprend les *maṇḍalas* sino-tibétains de Kouan-yin qui prennent un aspect tout spécial. Ce sont ces quatre catégories que nous allons passer en revue.

1.

Le *maṇḍala* d'Avalokiteçvara aux onze têtes et aux mille bras comporte de nombreuses représentations. Il commence sur les fresques des grottes de Touen-houang pour finir sur un xylographe signé d'un nom de graveur, Wang Wen-tchao, 王 文 沼, et daté de 980. Cela montre qu'il a connu les représentations les plus

[21] Traducteur inconnu. Époque des Han orientaux. *Tripiṭaka de Tōkyō*, VI. 5. 4[b] et suivantes.

solennelles comme les plus populaires et que tous les rangs des fidèles ont porté à cette forme souveraine d'Avalokiteçvara la dévotion la plus entière.

Une peinture qui porte la cote Ch. lvi. 0019 (Pl. LXIII; *Th. B.*, Pl. XVII) nous montre un exemple d'un *maṇḍala* de ce genre à large ordonnance. Les identifications des personnages y sont facilitées par des inscriptions dont la plupart sont lisibles.

Au milieu, sur une fleur de lotus, portée par le *chen* de la terre et par le *chen* de l'eau,[22] siège le Bodhisattva. Autour et au-dessus de la tête principale, les dix autres têtes s'échafaudent en pyramide. Les innombrables bras du Bodhisattva rayonnent autour de lui, portant divers attributs parmi lesquels l'épée, la conque, le flacon d'ambroisie, le livre, le chapelet, la cloche, la roue, la pagode, le Buddha, et, parmi les paires de bras levées à hauteur de la tête, le globe de la lune à droite, avec le lièvre qui pile du riz, et, à gauche, celui du soleil, avec la corneille à trois pattes. Toutes les mains portent, ouvert dans la paume, l'œil de sagesse qui se répète encore sur une masse innombrable de mains formant une auréole ronde et de couleur rouge autour de la figure centrale.

Un dais la surmonte et, au-dessus du dais, à gauche de la figure centrale, on voit le globe rouge du soleil; à droite, le globe blanc de la lune. Dans le globe du soleil un Bodhisattva monté sur un char tiré par des oies est accompagné de l'inscription 日光菩薩; dans le globe de la lune, un Bodhisattva monté sur un char tiré par des chevaux est accompagné de l'inscription 月光菩薩. Ce sont, non à proprement parler, Sūrya et Candra, mais les Bodhisattvas de la lumière du soleil et de la lune, Sūryaprabha et Candraprabha. Dans les coins de gauche et de droite, des Buddhas assis sur des fleurs de lotus et portés sur un nuage, comme dans les *maṇḍalas* d'Amitābha (xlvii. 001; *Th. B.*, Pl. XI) et de Çākyamuni (liv. 004; *Th. B.*, Pl. VI), sont désignés comme 'ceux qui ont le pouvoir de se manifester en tous lieux' 千方化得. Ce sont les Buddhas des dix régions et des trois mondes.

Nous avons ainsi identifié les personnages de la partie supérieure de la peinture. Au-dessous de cette ligne, de part et d'autre du dais et de l'auréole, on voit quatre figures de Bodhisattvas. Les deux personnages extrêmes sont, à gauche 'celui qui verse les parfums' 降香, à droite 'celui qui jette des fleurs' 散花. Ce sont deux figurations impersonnelles, deux comparses des larges ordonnances bouddhiques. Mais les deux figures qui se trouvent immédiatement placées de part et d'autre de l'auréole sont plus intéressantes; elles ne représentent pas autre chose que deux formes d'Avalokiteçvara. Celle de gauche, toujours relativement à la figure centrale, est désignée comme 如意輪菩薩, *Jou-yi-loun p'ou-sa*;[23] celle de droite, 不空羅索, *Pou-kong-lo-souo*, Amoghapāça.[24]

Au-dessous de ces figures, on trouve, à la gauche du Bodhisattva central, un personnage accompagné de trois assistants. Tous trois sont agenouillés et joignent les mains. Il est désigné par l'inscription 天帝〇, T'ien-ti-. Cet empereur céleste n'est autre qu'Indra. Il a pour pendant, à droite, un autre personnage, vêtu à la chinoise, accompagné de deux assistants et portant une offrande. Il est désigné par l'inscription: 梵天王, Fan-t'ien-wang, c'est-à-dire Brahmā.

Les deux figures qui sont au-dessous sont des figures d'ordre tantrique. C'est à gauche 摩醯(?)首(?)羅天王, Maheçvara, bien facilement reconnaissable, du reste, au buffle blanc sur lequel il est monté; à droite 摩訶迦羅, Mahākāla: en guise d'ornement, il a des têtes de mort. Il est debout, il a trois têtes et six bras; la première paire de mains tient l'épée horizontalement, la seconde tient un lacet avec lequel il a attrapé à gauche un homme, à droite une femme. La troisième soutient derrière son dos la draperie avec laquelle il doit éteindre le soleil. Maheçvara et Mahākāla ne sont autre chose que des formes de Çiva. On voit ici un premier couple de divinités tantriques entrer franchement dans le *maṇḍala* d'Avalokiteçvara. Au-dessous de ces figures, on voit deux forts groupes de personnages. À gauche de la figure centrale, un Bodhisattva monté sur le phénix, à droite, un Bodhisattva monté sur le paon. Ils sont accompagnés chacun de deux Bodhisattvas. Aucune inscription ne permet de les identifier directement. Cependant, on peut y reconnaître: à droite Mahāmayūrī, sur le paon[25] et,

[22] Aucune inscription n'accompagne ces deux personnages secondaires, le cartouche qui leur était réservé n'ayant pas été rempli. Cette identification est mise cependant hors de doute par une inscription de la peinture lvi. 0014 dont je parlerai tout à l'heure. Le *chen* de la terre est à la gauche de Kouan-yin; le *chen* de l'eau à sa droite.

[23] [*Jou-yi-loun* fait pendant à Amoghapāça dans *Butsuzō-zuï*, ch. ii. p. 13ª. Sa dhāraṇī se trouve dans la *Tripiṭaka*, XXVI. 5. 1ª.]

[24] [Amoghapāça-dhāraṇī, XXVII. 10. 4ª.]

[25] L'inscription placée au-dessous du cou du paon porte *Kong-tsio wang* (roi-paon).

à gauche, Mārīcī montée sur l'oiseau solaire, le phénix ; chacune d'elles est suivie de deux assistants. Ces deux divinités sont les assistantes régulières de la Tārā verte dans l'iconographie tibétaine.

En avant de ces deux Bodhisattvas, on voit deux figures misérables, levant les mains vers Avalokiteçvara qui laisse tomber vers eux l'ambroisie. L'inscription sur les cartouches est presque indéchiffrable. Cependant on peut y lire encore avec certitude les mots 甘露. Or, cette 'douce rosée' et l'attitude des malheureux qui la reçoivent suffisent pour identifier la scène tout entière. En effet, les vieillards représentent ici les *preta* qui se désaltèrent à la source miraculeuse du Bodhisattva de Miséricorde.[26]

Quant aux quatre personnages qui se trouvent deux par deux, de part et d'autre de la figure centrale, au-dessous de Mahāmayūrī et Mārīcī, il n'est pas difficile d'y reconnaître, dès le premier abord, une figuration des quatre Rois. Le premier d'entre eux, à droite de la figure centrale, semble être Vaiçravaṇa, le Roi du Nord. Dès lors, nous pouvons identifier tous les autres. Celui des Catur-Mahārājas qui se trouve en face de lui, portant, comme lui, l'épée, n'est autre que le Roi du Sud, Virūḍhaka. Celui qui porte la lance, derrière Vaiçravaṇa, à droite de la figure centrale, est Virūpāksha, Roi de l'Ouest, et le dernier enfin, derrière Virūḍhaka, n'est autre que Dhṛitarāshṭra, Roi de l'Est.

Il reste enfin en bas de la peinture, en dehors d'assistants anonymes, porteurs d'offrandes, deux figures tantriques. Sur une autre peinture, ils sont désignés comme les *porteurs du foudre, à la tête de feu.* Ce sont des Vajrapāṇi. Nous allons les retrouver, plus lisibles et moins mutilés, sur la peinture suivante.

Celle-ci (Ch. xxviii.006, Pl. LXIV; *Th. B.*, Pl. XLII) n'est autre qu'une réduction du *maṇḍala* à large ordonnance que nous venons d'étudier. Si Kouan-yin a toujours ses mille bras et son auréole de mains avec l'œil ouvert dans la paume, elle n'a plus onze têtes, mais une seule, coiffée d'une tiare dans laquelle on voit son Dhyāni-Buddha Amitābha. Toute la figuration de la partie supérieure est réduite à la représentation des Bodhisattvas de la lumière du soleil et de la lune, chacun dans leur globe respectif. Seulement, le peintre s'est trompé ; il a interverti les figures et au lieu de mettre le Bodhisattva du soleil dont le char est traîné par l'oiseau solaire, l'oie, dans le globe rouge du soleil, à la gauche de Kouan-yin, il l'a mis dans le globe de la lune, à droite. Naturellement, le Bodhisattva de la lune, traîné par des chevaux, a pris place dans le globe du soleil.[27]

À droite de la figure centrale, on voit un Bodhisattva porteur d'offrande, à gauche un brahmane qui, la main droite levée, semble se garantir les yeux. Les caractères 婆藪光 semblent évoquer la lumière rayonnante de Kouan-yin qui vient éblouir le saint homme.[28]

Enfin, en bas, on retrouve les génies de la terre et de l'eau, le corps surgissant de l'océan, soutenant le globe dans lequel apparaît Kouan-yin, puis dans les coins de droite et de gauche, les deux Kin-kang (Vajrapāṇi) aux formes terribles. Cependant, comme les Bodhisattvas de la lune et du soleil, leur place est intervertie. Celui qui devait être à gauche est à droite et vice versa.

Quant aux inscriptions elles sont, elles aussi, assez embrouillées. Toutes deux remplissent deux cartouches au-dessus du Vajrapāṇi de gauche tandis que, évidemment, elles sont l'une relative au Vajrapāṇi de gauche, l'autre relative au Vajrapāṇi de droite. Elles portent les indications suivantes : 火頭金◯[29]大恐◯ et 火頭跋◯大恐◯. Ce sont deux Vajrapāṇis ; ils appartiennent à ces divinités terribles, qui soumettent les démons et qui sont spécialement évoqués dans les exorcismes et les incantations magiques de l'école Yogācārya.

Cependant, ces figures énigmatiques méritent un examen approfondi, d'autant plus nécessaire que nous avons à nous expliquer la présence à leur pied de deux génies, l'un à la tête de *nāga*,[30] l'autre à la tête d'éléphant.

Ces Vajrapāṇi figurent dans le *Butsuzō-zuï*. Nous y retrouvons précisément celui qui est mis en rapport avec Kouan-yin. Il règne sur les régions du sud et il y est désigné sous le nom de 軍荼利, Kiun-tch'a-li. C'est Kuṇḍali 'qui brise et renverse tous les Asuras et les mauvais génies'.[31]

[26] On en a des représentations en Inde. Cf. Foucher, *Iconographie bouddhique*, I, planche IV, fig. 4 et p. 102–3. Dans la sculpture reproduite par A. Foucher (fig. 12), p. 101, je crois qu'on a une représentation analogue à celle de la peinture que j'étudie ensuite 'la lumière du brahmane'.

[27] Ces interversions et ces erreurs sont encore plus fréquentes dans les sculptures que dans les peintures.

[28] C'est une représentation analogue que semble comporter la sculpture reproduite par A. Foucher dans son *Iconographie bouddhique*, tome I, fig. 12. [En fait, ces trois caractères signifient 'l'éclat de Vasu'; le ṛishi Vasu a sauvé les coupables des enfers. *Butsuzō-zuï*, chap. iv. p. 3^b.]

[29] Probablement 剛.

[30] [The head is that of a boar; see above, p. 1036.—F. Lorimer.]

[31] 青龍疏. 摧伏一切阿修羅諸惡鬼神. *Butsuzō-zuï*, chap. ii. p. 20^b. L'image porte à la gauche: *pen li Kouan-yin* 本地觀音.

De même que ce porteur du foudre est associé avec Kouan-yin, il en est un autre qui est mis en rapport avec Çākyamuni. Ce dernier règne sur les régions du Nord. Il est désigné dans le *Butsuzō-zuï* sous le nom de 金剛夜叉, Kin-kang-Yaksha, 'qui brise et renverse tous les Yakshas redoutables.'[32]

La question qui se pose tout d'abord est de savoir si, dans le *maṇḍala* de Kouan-yin, nous avons les deux Vajrapāṇi, celui du Nord et celui du Sud et, par conséquent, celui qui est spécialement consacré à Avalokiteçvara à côté de celui qui est consacré à Çākyamuni, ou bien si nous avons seulement, par amour de la symétrie, deux exemplaires du Vajrapāṇi consacré à Avalokiteçvara.

Je ne crois pas à la duplication d'un seul Vajrapāṇi. Le fait que l'un préside aux régions du Nord, l'autre aux régions du Sud, me fait penser que le Vajrapāṇi, incarnation de Çākyamuni, vient assister celui de Kouan-yin dans le *maṇḍala* d'Avalokiteçvara. Son action bienfaisante s'exerce en effet dans toutes les régions de l'espace et c'est une des particularités essentielles du *maṇḍala* que de les évoquer toutes. De quatre, elles se réduisent à deux dans les *maṇḍalas* peints. C'est ainsi qu'ailleurs (peintures Ch. lii. 004, Pl. LXII ; lviii. 001, Pl. LVIII ; *Th. B.*, Pl. IX) nous avons vu les quatre Rois des quatre points cardinaux se réduire à deux seulement. Mais je ne connais pas d'exemple où l'évocation de l'action bienfaisante d'un Buddha ou d'un Bodhisattva dans l'espace soit limitée à l'une seulement des quatre directions. Dès lors, ou bien il faut accepter tel quel le groupe que le *Butsuzō-zuï* nous donne comme un groupe complet et le reporter sur la peinture ; ou bien, il faut considérer qu'un autre Vajrapāṇi, incarnation de Kouan-yin, est venu se joindre au premier. La première de ces solutions est de beaucoup la plus probable et il n'y a rien que de très ordinaire à voir un Vajrapāṇi, incarnation de Çākyamuni, venir faire pendant, dans un *maṇḍala* d'Avalokiteçvara, à un Vajrapāṇi, incarnation du Bodhisattva de Miséricorde.

Il nous reste maintenant à identifier les génies agenouillés aux pieds des deux 'porteurs du foudre' à la tête de feu. Le texte du *Butsuzō-zuï* doit déjà nous faire penser qu'il s'agit de démons et de *chen* malfaisants soumis par la force universelle des Vajrapāṇis. Si nous rapprochons de notre peinture une stèle à inscriptions récemment étudiée par M. Chavannes, nous pourrons mettre ce fait hors de doute.[33]

La stèle représente, en somme, un *maṇḍala* que l'inscription dit être consacré à Çākyamuni.[34] Sur le piédestal, et au-dessous des deux Vajrapāṇi, on trouve une série de dix personnages. Ce sont les Rois-Esprits des *nāgas*, des vents, des perles, du feu, des arbres, des montagnes, des poissons, des éléphants, des oiseaux, des lions. À comparer les personnages de notre peinture à ceux de la stèle, on voit que, dans le *maṇḍala* peint d'Avalokiteçvara, le Roi-Esprit des Éléphants, 象神王, se trouve à genoux devant le Vajrapāṇi à la droite de la figure centrale, et que le Roi-Esprit des *nāgas*, 龍神王, se trouve à genoux devant le Vajrapāṇi de gauche. Nous avons donc bien devant nous, comme le supposait M. Chavannes, des divinités populaires soumises par la religion universelle et devenues des Yakshas. Ce sont les personnifications des génies malfaisants écrasés et convertis par les porteurs du foudre. Ils sont si bien subjugués par les Vajrapāṇis qu'ils les assistent dans les peintures, à genoux et les mains jointes.

Un autre *maṇḍala* de Kouan-yin (Ch. lvi. 0014), dont l'ordonnance est cette fois très développée, va nous permettre de déterminer encore certains éléments nouveaux. On y retrouve, au centre, Avalokiteçvara aux onze têtes et aux mille bras, dans son auréole de mains innombrables munies de l'œil de sagesse dans la paume ouverte. En haut, à droite et à gauche, 日藏菩薩 et 月藏菩薩, le Bodhisattva Sūryagarbha (du soleil) et le Bodhisattva Candragarbha (de la lune) ; au-dessous, à droite et à gauche, deux groupes de Buddhas, avec l'inscription 南謨十方三世一切諸佛, représentent tous les Buddhas des trois époques et des dix côtés. Puis, au-dessous encore, à la gauche et à la droite de la figure centrale, on voit les Catur-Mahārājas. Des inscriptions qui les accompagnent les identifient d'une manière tout à fait précise. On lit, à gauche :

南方毗樓勒叉天王時
西方毗樓博叉天王時

[32] 青龍疏. 摧伏一切阿, 畏夜叉. L'image porte à gauche : *pen-ti che kia* 本地釋迦.

[33] *Ars Asiatica*, II. 'Six Monuments de la Peinture chinoise,' par Ed. Chavannes, chap. iii. 'Une sculpture bouddhique de l'année 543,' p. 15 (Pl. XXV et XXIX).

[34] Je serai porté à croire qu'au moins les figures centrales, par suite d'une erreur du sculpteur, viennent d'un *maṇḍala* d'Amitābha et non de Çākyamuni.

c'est-à-dire : le moment où (se manifeste) le Roi céleste du Sud, Virūḍhaka ; le moment où (se manifeste) le Roi céleste de l'Ouest, Virūpāksha.

On lit à droite :

東方提頭賴吒天王時
北方毗沙門天王時

Le moment où (se manifeste) le Roi céleste de l'Est, Dhṛitarāshṭra.
Le moment où (se manifeste) le Roi céleste du Nord, Vaiçravaṇa.

Mais au-dessous du groupe des quatre Rois se trouvent encore quatre personnages en costume guerrier, distribués deux à deux de part et d'autre de la figure centrale.

Le premier de ces personnages, à la gauche d'Avalokiteçvara, porte l'indication : 地神時, ' le moment où (se manifeste) le *chen* de la terre.' Son vis-à-vis, à droite, porte l'indication : 水神時, 'le moment où (se manifeste) le *chen* de l'eau.' Ce sont les esprits de la terre et de l'eau qui, dans les *maṇḍalas* précédents, le corps à demi plongé dans l'eau, soutenaient le trône de Kouan-yin. Ici ils ont passé au grade d'assistant sans cesser de jouer cependant leur rôle de cariatide, car on les retrouve, au bas de la peinture, portant le globe dans lequel apparaît Kouan-yin et désignés par l'inscription : 土神時 et 水神時. Cela seul suffirait à indiquer qu'il y a une différence entre ces esprits de la terre et de l'eau et ceux qui soutiennent le halo de Kouan-yin. Mais il y a plus. Ici ils ne sont point au nombre de deux, mais de quatre. Il s'agit de déterminer quels sont ces deux autres génies qui les accompagnent. L'un d'eux est désigné par une inscription malheureusement illisible ; il a les mains jointes et se trouve à gauche d'Avalokiteçvara. L'autre, à droite, porte dans la main une sorte de *maṇi*, une boule de feu. Si leurs partenaires sont les génies de la terre et de l'eau, il n'est pas difficile d'y reconnaître les génies de l'air et du feu. Les génies sont donc directement associés ici aux génies des quatre points cardinaux, aux Catur-Mahārājas qui règnent respectivement sur les régions du Sud, de l'Est, du Nord et de l'Ouest. Aux quatre Rois des quatre points cardinaux viennent s'adjoindre les génies des quatre éléments.

Au-dessous encore, deux personnages en costume laïque chinois, accompagnés chacun de deux assistants. L'un d'eux seulement, à la droite de la figure centrale, porte une inscription : 大梵王時, 'le moment où (se manifeste) Mahā-Brahmā.' D'où nous pouvons conclure que le second personnage à gauche, qui porte comme celui-ci l'habit princier, ne peut être autre qu'Indra. (Ce qui nous est du reste confirmé par l'inscription de la peinture Ch. lvi. 0019, Pl. LXIII ; *Th. B.*, Pl. XVII.) Cela nous amène à cette constatation singulière, mais qui ne m'en semble pas moins inévitable, qu'Indra et Brahmā, assistants constants de Çākyamuni dans les bas-reliefs gandhariens, sont venus jouer le même rôle à côté d'Avalokiteçvara.

En bas de la peinture, au-dessous d'Avalokiteçvara, on voit un autel. De part et d'autre se tiennent debout deux personnages qui n'ont plus cet aspect déjà vu de Bodhisattvas anonymes, porteurs d'offrandes, mais qui présentent, au contraire, un caractère assez individualisé. Une inscription les accompagne. C'est, à gauche : 婆瘦仙時, 'le moment où (se manifeste) le saint homme (Vasu)' ; à droite, l'inscription est illisible.[35] Cependant, si le groupement traditionnel signifie quelque chose en iconographie bouddhique, nous devons voir dans cette autre figure Asaṅga, le frère de Vasubandhu, qui prêcha comme lui la doctrine du Paradis d'Amitābha, le Dhyāni-Buddha d'Avalokiteçvara. Leur présence dans le *maṇḍala* du Bodhisattva de Miséricorde s'explique donc parfaitement.

Enfin, dans les coins de droite et de gauche, on retrouve les deux 'porteurs du foudre à la tête de feu', les Vajrapāṇis déjà étudiés sur les deux *maṇḍalas* précédents. Ils sont accompagnés de l'inscription 火頭金剛時. Mais ils ne sont pas accompagnés ici des images des Rois-Esprits des Éléphants et des Dragons sur lesquels nous avons eu à nous arrêter plus haut.

Cette peinture, notablement inférieure aux deux peintures précédentes au point de vue artistique, est cependant, comme on le voit, précieuse pour les indications précises et diverses qu'elle nous livre sur les *maṇḍalas* à large ordonnance d'Avalokiteçvara. Une autre peinture, *maṇḍala* à ordonnance restreinte (Ch. 00102, Pl. LX), va cependant nous apporter encore un élément nouveau.

[35] [Mr. Yabuki reads : '明德天時', but the 功德 is what is written, even if 明德 is intended.—A. D. Waley.]

Kouan-yin aux huit bras et aux onze têtes siège sur un lotus, derrière un autel. Par dérogation à la coutume, elle tient le soleil à droite et la lune à gauche ; on voit en haut, dans les coins, les Buddhas des dix directions du monde qui viennent l'assister. Puis, à droite et à gauche, deux figures de prêtres sur lesquels je reviendrai tout à l'heure, deux des quatre Rois désignés respectivement par l'inscription 南方比留勒叉天王, à gauche d'Avalokiteçvara, et 東方提頭頼吒天王, à droite. Ce sont donc Virūḍhaka, Roi céleste du Sud et Dhṛitarāshṭra, Roi céleste de l'Est. Ensuite, viennent quatre Bodhisattvas, distribués à droite et à gauche d'Avalokiteçvara. Les inscriptions portent à gauche : 南无延壽命菩薩 et 南无常勤進菩薩, 'adoration au Bodhisattva qui prolonge la vie ; adoration au Bodhisattva Nityavīrya (Constante Énergie).' Les inscriptions portent à droite : 南无如意輪菩薩 et 南无常舉手菩薩, 'adoration au Bodhisattva à la roue conforme à la pensée, adoration au Bodhisattva (qui tend) sa main toujours secourable.' Ces quatre Bodhisattvas ne sont autre chose que des formes de Kouan-yin. Deux d'entre eux entrent dans des groupes déterminés. Le premier est le quatorzième de la série des trente-trois Kouan-yin ; le troisième est le cinquième de la série des sept Kouan-yin.[36] Il faut donc conclure que Kouan-yin est ici assistée par elle-même ; je reviendrai sur cette observation à propos d'un type de *maṇḍala* dont je parlerai tout à l'heure.

Enfin, en bas de la peinture, deux Vajrapāṇi sont désignés par les inscriptions : 南无大聖蜜跡金剛, à gauche de la figure centrale, et 南无護法聖大力剛金 à droite. Dans cette dernière inscription les deux derniers caractères sont certainement intervertis. 'Le grand saint Guhyapadavajra ; — le saint (à la grande force), protecteur de la Loi, Mahābalavajra.' Nous avons vu déjà dans les trois précédents *maṇḍalas* figurer ces porteurs du foudre. Je ne puis que renvoyer à ce que j'en ai dit à propos de la peinture Ch. xxviii. 006 (Pl. LXIV ; *Th. B.*, Pl. XLII).

J'ai signalé en passant les deux assistants prêtres, à gauche et à droite de Kouan-yin. Il est temps d'y revenir à nouveau. Ils sont désignés, celui de gauche, par l'inscription : 舍利弗知惠弟一, celui de droite par l'inscription : 須菩提解空弟一. Il est donc hors de doute que le premier est Çāriputra et le second est Subhūti. Les épithètes qu'ils portent évoquent ici leurs primautés respectives. Çāriputra est le premier par la sagesse (prajñā) et Subhūti le premier pour l'explication du vide (Prajñā-pāramitā).

J'ai déjà été amené à signaler, pour le *maṇḍala* classé sous la cote Ch. xxviii. 006, l'intervention dans un *maṇḍala* de Kouan-yin d'une forme de Vajrapāṇi, incarnation de Çākyamuni. Ici, nous voyons deux disciples fameux du Buddha historique venir se ranger aux côtés d'Avalokiteçvara. C'est toujours le même mouvement d'absorption qui se poursuit. Le Bodhisattva de Miséricorde et de Pitié prend un tel développement, une telle influence, il personnifie d'une façon si étendue les aspirations des fidèles qu'il tend à annexer, dans son Paradis, des éléments qui lui étaient étrangers et que, dans sa magnificence, il surpasse les Buddhas eux-mêmes. Nous l'avons vu jusqu'ici emprunter à la figuration qui accompagne Çākyamuni : un Vajrapāṇi, Brahmā et Indra, enfin Subhūti et Çāriputra. Nous allons voir, avec la peinture suivante, que le *maṇḍala* d'Avalokiteçvara devient plus riche encore.

La peinture que nous venons d'étudier nous montrait une grande Kouan-yin aux mille bras et aux onze têtes assistée de quatre autres Kouan-yin réduites au rôle de comparses. Dans un *maṇḍala* (Ch. lv. 0023 ; *Th. B.*, Pl. XVI) d'une formule toute différente, daté de 864, nous allons voir diverses formes d'Avalokiteçvara jouer ensemble, et sans céder le pas l'une à l'autre, un rôle prédominant.

Ce *maṇḍala*, que je désignerai sous le nom de *maṇḍala* des quatre Kouan-yin, nous montre, en haut, quatre hautes figures, debout sur le lotus et de grandeur égale. Chacune est accompagnée d'un cartouche à inscription. Ce sont, de droite à gauche :[37]

大悲救苦觀世音菩薩
大聖救苦觀世音菩薩
大悲十一面觀世音菩薩
大聖如意輪菩薩

[36] *Butsuzō-zui*, chap. ii. p. 12^b–13^a et 13^b–17^a.

[37] Du spectateur.

La grande Miséricordieuse qui secourt de peine, Kouan-che-yin P'ou-sa.
La grande Sainte qui secourt de peine, Kouan-che-yin P'ou-sa.
La grande Miséricordieuse aux onze têtes, Kouan-che-yin P'ou-sa.
La grande Sainte dont la roue est conforme à la pensée, Kouan-che-yin P'ou-sa.

Toutes ont le Dhyāni-Buddha Amitābha dans la tiare. La Kouan-yin aux onze têtes n'a qu'une tête dans l'image et il faut se contenter à cet égard de son épithète, du reste très explicite; elles répètent deux à deux le même geste.

Au-dessous, on voit apparaître de nouveaux figurants que l'on retrouvera du reste dans les *maṇḍalas* sino-tibétains de Kouan-yin. Ce ne sont autres que les Bodhisattvas Samantabhadra et Mañjuçrī. Mañjuçrī est monté sur le lion rugissant, Samantabhadra sur l'éléphant blanc à six défenses. Les animaux fabuleux sont conduits par leur cornac indien et chacun des deux grands Bodhisattvas est assisté de deux Bodhisattvas porteurs de parasols à trois étages. Pour qu'aucun doute ne reste quant à cette identification, d'ailleurs évidente, on lit sur un cartouche à inscription, au centre de la peinture:

大聖文殊師利菩薩
大聖文殊普賢菩薩

Le grand Saint Wen-tchou-che-li P'ou-sa (Mañjuçrī).
Le grand Saint Wen-tchou-po-hien P'ou-sa (Mañju-Samantabhadra).

Ainsi donc, ici encore, deux assistants de Çākyamuni viennent prendre place dans le *maṇḍala* d'Avalokiteçvara. Rien ne saurait montrer avec plus d'évidence le caractère universel et envahissant du grand Bodhisattva de Miséricorde.

2.

Tels sont les grands *maṇḍalas* d'Avalokiteçvara que nous pouvons isoler en un premier groupe. Celui que nous venons d'étudier, malgré sa composition très particulière, se relie malgré tout aux autres, car nous y avions trouvé déjà Avalokiteçvara assisté par certaines de ses propres formes. Il ne fait en somme que projeter toutes ensemble et au premier rang des personnifications d'Avalokiteçvara qui, ailleurs, demeuraient subordonnées à l'une d'entre elles.

Si nous suivons maintenant les peintures du même ordre, nous assistons aux mêmes réductions de l'ordonnance générale et de la composition déjà signalées plus haut. Tantôt la Kouan-yin aux mille bras et aux onze têtes garde les quatre Rois et divers Bodhisattvas assistants, tantôt elle n'est plus assistée que de deux formes d'elle-même 'la Kouan-yin à la roue conforme à la pensée' 如意輪菩薩. Tantôt, une simple Kouan-yin au flacon (Ch. 00167, Pl. LXI) siégeant sur un lotus, derrière l'autel flanqué des deux Bodhisattvas porteurs d'offrandes, n'est plus assistée que de quatre Bodhisattvas aux mains jointes. Le mécanisme de ces réductions, conduisant jusqu'au Bodhisattva accompagné de deux assistants, reste le même et j'ai donné à ce sujet, dans le chapitre consacré aux Buddhas, des précisions suffisantes pour n'y plus revenir.

3.

On a vu dans les *maṇḍalas* consacrés aux Buddhas l'importance que prenaient les scènes marginales dans certains d'entre eux. On a vu aussi comment à l'occasion ces scènes, échappant à cet isolement dans les marges, venaient se mêler à l'ordonnance même du *maṇḍala*. Si le type du *maṇḍala* de Kouan-yin s'est singularisé de manière à prendre un caractère tout particulier, à ce dernier point de vue, cependant il se rapproche de ces *maṇḍalas* où les scènes marginales sont venues se grouper autour de la figure centrale. À cet égard, il prend un aspect spécial. Je le désignerai sous le nom du '*maṇḍala* de la Kouan-yin aux miracles'. L'un d'entre eux, le plus simple, se recommande non pour ses mérites artistiques qui sont nuls, mais pour la clarté et la facilité de sa lecture.

Un premier *maṇḍala* de la Kouan-yin aux miracles (Ch. xxi. 001), daté de 963, nous montre, au centre de la peinture, une Kouan-yin debout sur le lotus, en *padmacintāmaṇi*, portant le bijou fabuleux. Des donateurs sont debout, au bas de la peinture; en haut, un dais soutenu par des figures volantes; de part et d'autre de la figure centrale, la représentation des miracles du Bodhisattva de Miséricorde. Un second *maṇḍala* du même

ordre (Ch. lvii. 001, Pl. LXVIII) nous montre une Kouan-yin à quatre bras, portant comme attribut le flacon, les globes du soleil et de la lune, et faisant de la quatrième main libre la *mudrā* de l'absence de crainte. Elle est assise sur un haut trône portant le lotus. Au-devant un autel et, de chaque côté, deux figures d'assistants. Dans l'espace réservé de part et d'autre de la figure centrale, on voit la représentation des miracles de Kouan-yin.

Enfin, une troisième peinture, Ch. xl. 008 (*Th. B.*, Pl. XXII), nous montre une Kouan-yin à six bras faisant des *mudrās* et portant le flacon ainsi que les globes du soleil et de la lune. Elle siège sur un lotus, derrière un autel dégarni d'assistants. Il ne reste plus autour d'elle que la représentation de ses miracles. Il s'agit maintenant de voir quels sont ces miracles. Aucune de ces peintures ne comporte d'inscriptions qui pourraient les expliquer. Les cartouches ont bien été réservés, mais ils sont restés vides. Pour éclairer ce mystère, il faudra donc avoir recours à d'autres documents.

Heureusement, le culte de Kouan-yin a été tellement populaire que, ce que les vieilles peintures de Touen-houang ne peuvent nous révéler, des images chinoises vont nous le dire.

On connaît ces éditions chinoises de *sūtras* accompagnées d'une gravure occupant plusieurs pages et représentant précisément un *maṇḍala* du Buddha ou du Bodhisattva auquel se rapporte le livre sacré. M. Puini a publié en 1873, dans l'*Atsume-gusa* de Turettini, une de ces œuvrettes sous le titre 'Avalokiteçvara-sūtra'. Ce n'est autre chose que le 25ᵉ chapitre du *Saddharmapuṇḍarīka-sūtra* traduit du sanscrit par Burnouf sous le titre 'le Lotus de la bonne Loi'. Puini a reproduit la planche qui accompagne le texte dans le livre chinois. Cette planche est précisément un *maṇḍala* de la Kouan-yin aux miracles; les diverses scènes qui y sont groupées sont identiques à celles des peintures de Touen-houang; elles sont accompagnées d'une brève inscription qui permet de recourir au texte du *sūtra* et de se rendre un compte exact de l'épisode que le peintre bouddhiste a entendu illustrer. C'est en me servant de ces divers éléments que je vais identifier les scènes de la peinture de Touen-houang.

On voit en haut, à la gauche de la figure centrale, un condamné à mort entre deux hommes dont l'un le maintient par les liens qui entravent ses mains, tandis que l'autre, tirant les cheveux, le force à tendre le cou au bourreau brandissant une épée. Dans la gravure publiée par Puini, la même scène est accompagnée de l'inscription: 刀尋段段壞, ce qui correspond au passage suivant du *Saddharmapuṇḍarīka-sūtra*:

或遭王難苦 臨刑欲壽終 念彼觀音力 刀尋段段壞.

'S'il t'arrivait d'encourir la colère du Roi, — que tu sois sur le point de subir le dernier supplice et que tu aies le désir de vivre ta vie tout entière, — si tu invoques la puissance de Kouan-yin, — l'épée soudain tombera en poussière.'

Au-dessous de cette première scène, un second épisode demeurerait difficilement compréhensible si nous n'avions à notre disposition la gravure reproduite dans l'*Atsume-gusa*.

Sur la peinture de Touen-houang, nous voyons simplement une nuée de laquelle on voit tomber soit de la grêle, soit de la pluie, représentées par des petits points. Sur la gravure, au contraire, on voit un homme traversant un pont, ouvrant un parasol et, au-dessus de lui, une nuée sur laquelle apparait le dieu du tonnerre et de laquelle surgit un dragon crachant la pluie. Le cartouche gravé porte l'inscription 應時得消散. Il n'est donc pas difficile de se reporter au passage suivant du *Saddharmapuṇḍarīka-sūtra*:

雲雷鼓掣電 降雹澍大雨 念彼觀音力 應時得消散.

'Quand les nuées au tonnerre grondant et sillonnées d'éclairs — projettent la grêle et déversent une grande pluie, — si tu invoques la puissance de Kouan-yin, — nécessairement à ce moment tu obtiendras leur dispersion.'

La scène suivante au-dessous de celle-ci montre deux hommes; l'un poursuivi par l'autre est jeté au bas des montagnes. Une scène analogue de la gravure reproduite dans l'*Atsume-gusa* porte cette inscription: 不能損一毛 qui nous renvoie au passage suivant du *Saddharmapuṇḍarīka-sūtra*:

或被惡人逐 墮落金剛山 念彼觀音力 不能損一毛.

'Si tu étais poursuivi par des brigands, — qu'ils te renversaient et te jetaient au bas du mont Kin-kang (la montagne de diamant) — et si tu invoques la puissance de Kouan-yin, — ils ne pourront nuire à un seul de tes cheveux.'

Enfin, la dernière scène, au bas de ce côté, représente un homme debout et tranquille au milieu des flammes, tandis qu'un autre semble s'étonner de lui voir subir sans dommages ce supplice. La même scène dans la gravure porte l'inscription: 火坑變成池, ce qui nous reporte au passage suivant du *Saddharmapuṇḍarīka*:

假使興害意 推落大火坑 念彼觀音力 火坑變成池.

'À supposer que (naisse) en quelqu'un l'idée de (te) nuire — et qu'il te jette dans une fosse de feu, — si tu invoques la puissance de Kouan-yin, — la fosse de feu se changera en un étang d'eau.'

Si maintenant on se reporte aux scènes représentées à droite de Kouan-yin, on voit d'abord, en haut, deux hommes qui en ont jeté un troisième du sommet d'une montagne. Celui-ci, au lieu de tomber, est supporté par un nuage sur lequel il se tient à genoux et joignant les mains. La scène équivalente de la gravure reproduite dans l'*Atsume-gusa* porte l'inscription: 如日虛空住, ce qui évoque le texte suivant du *Saddharma-puṇḍarīka-sūtra*:

或在須彌峯 爲人所推墮 念彼觀音力 如日虛空住.

'Si étant au sommet du Siu-mi (Sumeru) — un homme te pousse et te renverse, — si tu invoques la puissance de Kouan-yin, — tu resteras suspendu dans l'espace comme le soleil.'

Au-dessous de cette scène, on voit un homme enchaîné et portant la cangue. À ses pieds, des entraves de fer sont déjà détachées. La scène correspondante de la gravure porte l'inscription: 釋然得解脫, ce qui nous reporte au texte suivant du *Saddharmapuṇḍarīka-sūtra*:

或囚禁枷鎖 手足被杻械 念彼觀音力 釋然得解脫.

'Si tu es prisonnier, enfermé dans la cangue et dans les chaînes, — et que tes mains et tes pieds sont serrés dans les ceps, — si tu invoques la puissance de Kouan-yin, — tu seras libre et délivré de tes liens.'

Enfin la dernière scène représente un homme debout, entouré d'un serpent, d'un scorpion et d'un tigre. La scène correspondante de la gravure reproduite dans l'*Atsume-gusa* porte l'inscription: 尋聲自廻去, ce qui nous reporte au passage suivant du *Saddharmapuṇḍarīka-sūtra*:

蚖蛇及蝮(蠍) 氣毒煙火然 念彼觀音力 尋聲自廻去.

'Si des reptiles, des serpents venimeux ou des scorpions (te menaçent) de leur souffle empoisonné pareil au feu fumant, — si tu invoques la puissance de Kouan-yin, — soudain, au son de ta voix, ils s'enfuiront.'

Tels sont les miracles identifiés sur le *maṇḍala* de Kouan-yin. D'autres versets du *Saddharmapuṇḍarīka-sūtra* pourraient être illustrés de même, et l'on trouve, par exemple, sur la peinture Ch. lvii. 001 (Pl. LXVIII), deux scènes de plus. Elles ont trait l'une aux brigands qui, poursuivant un fidèle, sont brusquement envahis d'un sentiment de miséricorde à l'appel du nom de Kouan-yin, l'autre aux démons, qui à l'invocation de Kouan-yin abandonnent le fidèle qu'ils voulaient tourmenter. On peut dire que, quelles que soient les variantes, on les retrouvera toujours dans le texte du *Saddharmapuṇḍarīka-sūtra.*

Ceci nous montre dès lors que la façon dont a été composé le *maṇḍala* de la Kouan-yin aux miracles est identique à celle qui a régi la composition des *maṇḍalas* d'Amitābha, de Maitreya, de Bhaishajyaguru ou de Çākyamuni. C'est dans un *sūtra* consacré à la divinité qui figure dans la partie centrale de la peinture que sont empruntées scènes et inscriptions, soit qu'elles restent enfermées dans un espace marginal, soit qu'elles viennent s'incorporer à la peinture même, comme nous en avons vu un exemple avec le *maṇḍala* du Buddha Maitreya (Ch. lviii. 001, Pl. LVIII; *Th. B.*, Pl. IX). Nous retrouvons pour Kouan-yin les mêmes règles, les mêmes procédés d'inspiration, la même composition.

4.

Nous passons maintenant à une autre catégorie de peintures relatives à Kouan-yin. Elles se distinguent par leur caractère très particulier aussi bien que par leur ordonnance; elles sont accompagnées parfois de doubles inscriptions chinoises et tibétaines, malheureusement presque complètement effacées. Ces éléments particuliers m'ont conduit à en faire un groupe à part. Le style n'est plus le style chinois des T'ang, mais un style plus fin qui rappelle plutôt les sculptures bouddhiques de l'époque des Wei du Nord et qui, d'autre part, rejoint le style tibétain. Ces peintures sont très intéressantes à des points de vue divers. Je les ai groupées sous la dénomination de sino-tibétaines.

La plus intéressante de toutes au point de vue artistique (Ch. xxxvii. 004, Pl. LIX; *Th. B.*, Pl. III) ne l'est pas moins au point de vue iconographique. C'est une grande peinture, malheureusement mutilée, car elle a été déchirée ou coupée à peu près en son milieu. On voit encore le buste de la figure centrale et c'est assez pour y découvrir sans conteste une représentation d'Avalokiteçvara aux mille bras. On retrouve parmi ses attributs le soleil et la lune; elle n'a qu'une seule tête, mais elle porte son Dhyāni-Buddha Amitābha dans la tiare. Elle est assistée de deux

Bodhisattvas ; on aperçoit la tête et la partie supérieure du buste de celui qui siège à sa droite. La soie est complètement rongée à gauche et la figure qu'elle portait a disparu. Si nous nous en rapportons aux données du premier *maṇḍala* de Kouan-yin que nous avons étudié (Ch. lvi. 0019, Pl. LXIII ; *Th. B.*, Pl. XVII) nous devons y reconnaître deux formes d'Avalokiteçvara elle-même. Ce sont 如意輪 et 不空羅索, Amoghapāça.

Jusqu'ici, nous ne trouvons rien que de très habituel. Cependant, si nous considérons la partie supérieure de la peinture, nous verrons aussitôt qu'elle se signale par une figuration nombreuse et une composition très développée.

Tout en haut, un Buddha préside au *maṇḍala* de Kouan-yin. On s'attendrait, naturellement, à y reconnaître son Dhyāni-Buddha Amitābha ; point : c'est le Buddha de Médecine, Bhaishajyaguru. Il est assisté de deux Bodhisattvas assis, une jambe pendante, sur le lotus. La forme de leur tiare, leur costume plus indien, leurs jambes nues, leurs membres grêles, la gracilité des gestes, l'expression rêveuse et calme d'un visage aux traits fins, tout nous montre ici un art d'un caractère nouveau. Il a précisément cette inspiration mélancolique et ce raffinement particulier à l'art des Wei du Nord et il s'oppose au caractère ramassé, vigoureux et un peu lourd des figures de l'époque des T'ang. Si nous nous reportons aux inscriptions du *maṇḍala* de Bhaishajyaguru étudié plus haut (Ch. lii. 003, Pl. LVII ; *Th. B.*, Pl. I, II), ces deux Bodhisattvas sont, à sa gauche, Mañjuçrī, à sa droite, Samantabhadra. Comme cette identification s'est trouvée confirmée par la peinture à inscriptions représentant un *maṇḍala* à ordonnance réduite de Bhaishajyaguru, cotée sous le chiffre (Ch. 00224), il n'y a aucune raison de ne pas tenir compte de cette double indication ici et d'hésiter à identifier les deux Bodhisattvas assistants autrement que par la règle.

Autour du Buddha de Médecine, nous trouvons des personnages divers, quatre figures de prêtres, dont trois parfaitement visibles, et six Bodhisattvas. Ici, les éléments d'identification nous manquent ; mais devant le Buddha, nous retrouvons l'autel flanqué des deux Bodhisattvas porteurs d'offrande ou orants que nous avons rencontrés déjà et signalés comme une partie essentielle des *maṇḍalas*.

Bhaishajyaguru nous apparaît donc ici présidant au *maṇḍala* de Kouan-yin avec une telle ordonnance qu'il apporte, en somme, au Bodhisattva de Miséricorde son propre *maṇḍala*. Au-dessous de lui, on voit un grand cartouche dans lequel il y eut jadis une inscription. On y devine encore les traces d'une inscription tibétaine et d'une inscription chinoise. J'ai pu y déchiffrer les noms de Bhaishajyagura et de Samantabhadra. Si ces éléments sont maigres, ils n'en mettent pas moins hors de doute l'identité du Buddha qui préside au *maṇḍala* de Kouan-yin.

De part et d'autre de ce cartouche, on voit à la gauche de Bhaishajyaguru et de la figure centrale de Kouan-yin, Mañjuçrī monté sur le lion et à leur droite Samantabhadra monté sur l'éléphant. Tous deux sont accompagnés d'une suite nombreuse. Un cornac indien guide le lion ou l'éléphant à six défenses, un Indien au corps noir précède chaque Bodhisattva, portant un vase précieux ou une corbeille d'offrandes, des anges les précèdent,[38] des Bodhisattvas les suivent et derrière ce cortège, deux à droite et deux à gauche, on voit apparaître les Catur-Mahārājas, les quatre Rois qui président aux quatre points de l'espace. Enfin, au-dessus de chacun de ces groupes, accroupis sur des nuages flottants, on voit une multitude de petits Bodhisattvas jouant le même rôle que, dans d'autres *maṇḍalas*, les groupes qui représentaient les Buddhas des dix directions de l'espace.

Nous avons déjà vu dans le *maṇḍala* des quatre Kouan-yin (Ch. lv. 0023 ; *Th. B.*, Pl. XVI) Mañjuçrī et Samantabhadra apparaître dans le même appareil, montés sur le lion ou sur l'éléphant à six défenses. Ces deux Bodhisattvas sont donc liés aussi bien à Bhaishajyaguru qu'à Avalokiteçvara. Il n'est pas étonnant, par conséquent, de les voir si somptueusement évoqués dans un *maṇḍala* où le Buddha de Médecine vient présider à la gloire du Bodhisattva de Miséricorde. Ils constituent un lien entre l'un et l'autre que rapproche déjà leur caractère rédempteur. Mais tous les renseignements que peut nous donner la peinture s'arrêtent là. La grave mutilation qui l'a frappée nous prive de toute la partie inférieure où nous aurions trouvé, sans aucun doute, une figuration importante. Peut-être les photographies des fresques de Touen-houang dont M. Pelliot a annoncé la publication nous livreront-elles toute entière l'ordonnance somptueuse de ce *maṇḍala* d'Avalokiteçvara.

Une autre peinture (Ch. 0074) rappelle, par son style, celle que je viens d'étudier. Les figures ont ce même

[38] Ils sont vêtus à la chinoise, les cheveux pendants sur le dos et non noués à la mode de l'époque des T'ang. Le *Butsuzō-zui* a une série de seize assistants de ce genre, les 辨財天十六童子, Sarasvatī-Kumāra. Le cinquième 稻粈童子 [le Kumāra au riz] est une incarnation de Mañjuçrī et le deuxième 官帶童子 [le Kumāra à la ceinture de fonctionnaire] de Samantabhadra (*Butsuzō-zui*, vol. III. 9).

caractère assez différent du style chinois de l'époque des T'ang, et cette même expression du visage qui rappelle l'art des Wei du Nord. Elle constitue un *maṇḍala* à ordonnance réduite d'un Avalokiteçvara en Padmacintāmaṇi. À droite et à gauche, les uns au-dessus des autres, siègent huit Bodhisattvas. Des inscriptions tibétaines sont lisibles seulement pour les quatre Bodhisattvas de la partie centrale de la peinture. Elles nous permettent d'identifier, à gauche de la figure centrale, Sarvanivaraṇavishkambhi ; comme pendant, à sa droite, Kshitigarbha. Puis, au-dessous, à gauche, Samantabhadra ; à droite, Mañjuçrī. Les deux Bodhisattvas du haut et les deux Bodhisattvas du bas restent indéterminés. Nous retrouvons, en tout cas, Mañjuçrī et Samantabhadra comme assistants d'Avalokiteçvara et les peintures sino-tibétaines viennent donc confirmer les données de la peinture chinoise Ch. lv. 0023 (*Th. B.*, Pl. XVI). Elles identifient, d'autre part, deux autres assistants parmi lesquels il est intéressant de trouver un Kshitigarbha sous son apparence traditionnelle, tibétaine ou chinoise, la tiare en tête, et non sous l'aspect du moine, comme nous le verrons tout à l'heure, dans ses *maṇḍalas*.

Enfin, une dernière peinture (Ch. lii. 001 ; *Th. B.*, Pl. XXXI) franchement tibétaine, au moins si l'on s'en rapporte à son style, mérite d'être rapprochée du grand *maṇḍala* dans lequel on voyait Bhaishajyaguru présider au Paradis d'Avalokiteçvara. C'est une peinture montée à la tibétaine, de style purement lamaïque, et, du reste, peinte comme les peintures tibétaines modernes, à la détrempe, sur toile. Les figures n'ont pas encore ces déhanchements violents, la composition n'a pas cette surcharge barbare des peintures tibétaines telles que nous les avons connues jusqu'ici. Elles sont cependant bien peu chinoises, et sont surtout indiennes de style. Déjà on y voit apparaître des mouvements accusés et, surtout, cette tendance à contourner les formes secondaires en ornements flexueux, qui est le propre de l'art tibétain tout entier. Au mélange de style indien et de style chinois que nous offraient ces peintures désignées par moi sous l'épithète sino-tibétaine, celle-ci oppose une tradition plus indienne — je dirai même *hindouiste* dans laquelle on voit s'annoncer cette danse échevelée des corps, cette déformation systématique qui vont devenir la marque de fabrique des poncifs religieux de la peinture tibétaine.

Le *maṇḍala* est consacré à Avalokiteçvara, ou plutôt à cette forme du Bodhisattva de Miséricorde à laquelle on a donné le nom de Padmapāṇi. Au milieu d'une auréole divisée transversalement par des bandes de couleurs vives, un nimbe circulaire derrière la tête, siège Padmapāṇi, un lotus jaillissant de chaque main. Tout en haut, nous retrouvons le Buddha de Médecine, Bhaishajyaguru, entre deux lamas à bonnet jaune. À la gauche de la figure centrale, on voit, du haut en bas, Avalokiteçvara blanc au flacon ; Avalokiteçvara jaune au flacon et à la fleur de lotus ; Avalokiteçvara noir à la fleur de lotus ; Avalokiteçvara brun au flacon et à la fleur de lotus.

À gauche on voit, du haut en bas : un Avalokiteçvara bleu au flacon et à la fleur de lotus ; un Avalokiteçvara jaune au flacon et à la fleur de lotus ; un Avalokiteçvara rouge au flacon et à la fleur de lotus ; un Avalokiteçvara au flacon et à la fleur de lotus.

Enfin, au milieu et en bas, une figure tantrique : la Çrīdevī bleue sur le cheval sellé de peau humaine.

Dans l'intervalle réservé entre chacun des Avalokiteçvara qui assistent Padmapāṇi, on voit la représentation d'un des miracles de Kouan-yin. Nous avons vu à propos de la peinture Ch. xl. 008 (*Th. B.*, Pl. XXII) que toutes ces scènes se rapportent à des passages du *Saddharmapuṇḍarīka-sūtra*. Il est donc inutile de revenir sur ce sujet. Mais ces scènes nous permettent de définir le *maṇḍala* d'une façon plus précise : c'est un *maṇḍala* de la Kouan-yin aux miracles.

Si cette peinture vient nous confirmer le lien établi dans l'iconographie entre Bhaishajyaguru et Avalokiteçvara, si elle vient mêler à cette figuration la représentation des miracles du Bodhisattva de Miséricorde ; si, enfin, elle confirme les données précédemment acquises en nous montrant Avalokiteçvara-Padmapāṇi assisté par lui-même, elle vient ajouter quelque chose de plus à tout ce que notre étude nous a appris jusqu'ici.

De la description faite, le lecteur aura déjà conclu à l'allure purement tibétaine de cette peinture. Comme j'ai déjà eu l'occasion de le dire à propos des peintures de Touen-houang, celles-ci ne sont pas postérieures au Xe siècle. Dès lors, je pense bien que le *maṇḍala* tibétain de Padmapāṇi, avec sa Çrīdevī si caractéristique et ses deux lamas à bonnet jaune, assistants de Bhaishajyaguru, représente la première manifestation iconographique aujourd'hui connue du bouddhisme lamaïque. Autre chose est une inscription tibétaine à côté d'une inscription chinoise, sur une peinture de style très particulier et désormais aboli ; autre chose est une composition aussi précise, répétée jusqu'à notre époque, avec un caractère si tranché et si franchement tibétain. On a ici un monument incontestable et incontestablement le plus ancien de l'art proprement dit lamaïque.

IX

Les Maṇḍalas de Kshitigarbha.

On connaît ces figurations japonaises de Kshitigarbha où il apparaît sous la forme du prêtre, le crâne rasé, le sistre et la boule *maṇi* à la main. On le retrouve sous le même aspect à Touen-houang et cela seul suffit à démontrer que cette forme singulière s'est élaborée en plein Turkestan.

C'est sous l'apparence du prêtre qu'il apparaît dans ses *maṇḍalas*. Ceux-ci sont plus particuliers encore que ceux d'Avalokiteçvara. On peut les diviser en deux sortes : la première où Kshitigarbha est représenté comme le maître des six *gatis* ; la seconde où il règne au milieu des dix rois infernaux.

La peinture cataloguée sous la cote Ch. lviii. 003 (Pl. LXVII ; *Th. B.*, Pl. XXV) et datée de 963, nous montre un Kshitigarbha en Maître des six *gatis*. Il est assis sur le lotus, il tient le *khakkhara* (sistre) du *bhikshu* dans la main droite, la boule *maṇi* dans la main gauche. Au-devant de lui, un autel de forme particulière, constitué par un rocher à vives arêtes ; à droite et à gauche, deux Bodhisattvas aux mains jointes sont désignés par l'inscription : 普門菩薩.[39]

De part et d'autre de Kshitigarbha, trois bandes se déroulent dans lesquelles des figurations permettent d'identifier chacune des six *gatis*. À sa gauche on voit, de bas en haut, le monde des *pretas*, le monde des dieux, le monde des hommes ; à sa droite et de bas en haut, le monde des enfers, le monde des animaux, le monde des Asuras.

Au *maṇḍala* des six *gatis* s'ajoute celui des dix rois. Une peinture (Ch. 0021, Pl. LXVII) nous montre Kshitigarbha, le sistre dans la main gauche, le *maṇi* dans la main droite, siégeant sur le lotus. À ses pieds un moine en prière et un lion rugissant. On les retrouve sur une autre peinture (Ch. xxviii. 003) où ils se trouvent de part et d'autre d'un autel chargé d'offrandes, érigé devant le lotus sur lequel siège le Bodhisattva. À droite et à gauche sont rangés les dix Rois. On reconnaît en bas, à gauche, le tribunal de Yama avec le miroir magique dans lequel un damné regarde l'évocation de ses crimes.

Ces dix Rois sont :

1°	秦廣	Ts'in-kouang.	Correspond à Pou-tong (Fudō).
2°	初江	Tch'ou-kiang.	Correspond à Çākyamuni.
3°	宋帝	Song-ti.	Correspond à Mañjuçrī.
4°	五官	Wou-kouan.	Correspond à Samantabhadra.
5°	閻魔	Yen-mo.	Correspond à Kshitigarbha.
6°	變成	Pien-tch'eng.	Correspond à Maitreya.
7°	太山	T'ai-chan.	Correspond à Bhaishajyaguru.
8°	平等	P'ing-teng.	Correspond à Avalokiteçvara.
9°	都市	Tou-che.	Correspond à Mahāsthāma.
10°	五道轉輪	Tchouan-louen des cinq chemins.	Correspond à Amitābha.[40]

De ces dix Rois, deux seulement ont un nom sanscrit ; c'est le cinquième, Yama, et le dixième, Cakravarti. Les autres portent des noms purement chinois. On remarquera que tous portent, sur la peinture, le vêtement chinois. C'est sous cet aspect qu'ils se sont perpétués aussi bien en Chine qu'au Japon. Cela semble bien indiquer l'origine purement chinoise de la plupart d'entre eux.

Il existe au Japon au moins un *maṇḍala* de Kshitigarbha assisté des dix Rois ; il est conservé au temple Myōō-in, 明王院, mais il ajoute un élément nouveau à la composition que je viens de décrire, car on y voit

[39] [Samantamukha Bodhisattva (cf. Tok. ii. 8).]

[40] J'ai suivi ici les indications du traité d'iconographie bouddhique japonais connu sous le nom de *Butsuzō-zuï* (ch. iii. p. 24a), et attribué à Kōbō Daishi, 弘法大師 (774–835), qui en aurait rapporté les éléments de Chine d'où il revint en 806. La liste que M. Chavannes a relevée en Chine et publiée dans le *T'ai-chan* (Paris, Annales du Musée Guimet, 1910) comporte quelques différences. Le nom du second roi s'écrit 楚江, le quatrième 仵官 et 五官 (à Moukden), le cinquième 閻羅, Yen-lo ; le dixième 轉輪 sans épithète. Il ne semble pas que les correspondances indiquées par le *Butsuzō-zuï* aient été jusqu'ici relevées en Chine.

figurer aussi en haut une rangée de Bodhisattvas, puis, au-dessous des dix Rois, une rangée de Kumāras et, enfin, une rangée de démons.

Cette peinture, fort ancienne, n'est du reste pas japonaise. Les critiques japonais la croient coréenne, peut-être chinoise. Elle rappelle étrangement, en tout cas, les peintures du Turkestan oriental.

La composition de Kshitigarbha présidant aux six *gatis* n'a pas toujours été exclusive de celle qui représente Kshitigarbha au milieu des Rois infernaux. Sur une peinture de Touen-houang (Ch. lxi. 009; *Th. B.*, Pl. XXXIX) on voit Kshitigarbha siéger sur le lotus, portant le sistre et la boule *maṇi*; les bandes dans lesquelles sont figurées les six *gatis* se développent de part et d'autre de l'auréole; en bas, par rangée de cinq, à droite et à gauche, en costume chinois, siègent les dix Rois. Au-devant de l'autel, on retrouve l'orant et le lion que nous avons déjà signalés. Ici les deux formes aujourd'hui connues des *maṇḍalas* de Kshitigarbha s'entremêlent pour n'en plus former qu'une.

Avec les *maṇḍalas* de Kshitigarbha nous avons achevé de passer en revue les *maṇḍalas* de Bodhisattvas. Ils nous sont apparus ici avec un caractère, une ordonnance et un développement qui ne le cèdent en rien aux *maṇḍalas* des Buddhas. Avalokiteçvara et Kshitigarbha s'y sont présentés dans une ordonnance telle qu'ils y surpassent le caractère et l'importance qu'on pouvait leur attribuer. Ainsi ils nous démontrent qu'il fut un temps où ils régnaient plus entièrement qu'aujourd'hui sur les âmes; dans toute l'autorité de leur passé, ils évoquent une ferveur disparue.

X

Les Maṇḍalas : les Comparses.

On a vu au chapitre II quels étaient les caractères généraux des *maṇḍalas*. Ils se distribuent suivant un plan d'ensemble à peu près invariable dans son ordonnance générale. Au milieu, la figure centrale, Buddha ou Bodhisattva, flanqué de ses assistants qui, eux-mêmes, peuvent être accompagnés de leurs propres assistants. Tout autour sont distribués des Bodhisattvas anonymes; les palais célestes se développent dans la partie supérieure de la peinture; les eaux du fleuve céleste coulent sous les plateformes richement ornées qu'occupent les dieux.

Mais on a vu aussi que, dans ce personnel secondaire, certains assistants présentaient des particularités très intéressantes et se retrouvaient dans des *maṇḍalas* divers. C'est sur ce point qu'il y a lieu de revenir. Nous avons à rapprocher ces peintures les unes des autres et à tirer de ce rapprochement des conclusions que leur étude successive ne nous avait pas permis d'établir.

Nous pouvons constater tout d'abord la généralité de certaines figurations. Les Buddhas des trois époques et des dix directions de l'espace figurent aussi bien dans les *maṇḍalas* de Buddhas comme Amitābha (Ch. xlvii. 001) et Çākyamuni (Ch. liv. 004) que dans le *maṇḍala* d'un Bodhisattva comme Avalokiteçvara (Ch. lvi. 0019 et Ch. lvi. 0014). Il est vrai que, dans le grand *maṇḍala* sino-tibétain (Ch. xxxvii. 004, Pl. LIX; *Th. B.*, Pl. III) d'Avalokiteçvara présidé par Bhaishajyarāja, tous les Buddhas des dix directions sont remplacés par des Bodhisattvas, ce qui est plus conforme à la nature de la divinité évoquée. Il n'en reste pas moins que nous avons, contre cet exemple unique, deux exemples formels où nous voyons le Bodhisattva de Miséricorde appelant par son rayonnement divin les êtres supérieurs de l'espace qu'il n'a pas encore égalés.

D'autres divinités dont l'évocation est, pour ainsi dire, générale et qui figurent presque obligatoirement dans les *maṇḍalas*, sont les Catur-Mahārājas. Les quatre Rois des quatre points cardinaux sont parfois au complet. Parfois ils sont réduits à deux seulement. Dans ce cas, c'est Vaiçravaṇa et Virūḍhaka qui sont choisis de préférence. Ils évoquent toujours, en tout cas, la présence des deux autres. On les trouve au complet dans un *maṇḍala* d'Amitābha (Ch. xlvi. 008) et dans deux *maṇḍalas* d'Avalokiteçvara (Ch. lvi. 0019 et lvi. 0014). On les trouve au nombre de deux et, dans les deux cas, il s'agit de Vaiçravaṇa et de Virūḍhaka, dans un *maṇḍala* d'Amitābha (Ch. lii. 004, Pl. LXII) et dans un *maṇḍala* de Maitreya (Ch. lviii. 001, Pl. LVIII). Dans ce dernier, cependant, ils sont assistés chacun d'un Vajrapāṇi. On les retrouve encore au nombre de deux dans un *maṇḍala* d'Avalokiteçvara (Ch. 00102, Pl. LX). Mais il faut noter encore que dans un *maṇḍala* du Bodhisattva de Miséricorde, où ils figurent au complet et que j'ai déjà cité (Ch. lvi. 0014), ils sont accompagnés aussi des *chen* des quatre éléments.

Passons maintenant aux Bodhisattvas assistants. Avalokiteçvara et Mahāsthāma sont les acolytes bien définis d'Amitābha. Aucune inscription ne nous permet de déterminer les Bodhisattvas assistants de Maitreya dans le *maṇḍala* où celui-ci apparaît sous la forme d'un Buddha. Aux côtés de Bhaishajyaguru, le Buddha de Médecine, nous trouvons Samantabhadra et Mañjuçrī (Ch. lii. 003, Pl. LVII, et Ch. liii. 002, Pl. LVI); ce sont aussi des assistants d'Avalokiteçvara (Ch. 0074; xxxvii. 004; lv. 0023). Nous trouvons Ākāçagarbha en qualité d'assistant de Çākyamuni et il est probable que son partenaire n'est autre que Kshitigarbha. Sūryaprabha et Candraprabha

figurent dans les *maṇḍalas* de Bhaishajyaguru aussi bien que dans un *maṇḍala* d'Avalokiteçvara (Ch. lvi. 0019) et, enfin, Brahmā et Indra que l'on se serait attendu à trouver aux côtés de Çākyamuni, figurent, au contraire, sous l'aspect non plus d'un prince indien, comme dans les sculptures gandhāriennes, mais d'un empereur chinois, dans deux *maṇḍalas* d'Avalokiteçvara (Ch. lvi. 0014; 0019).

Enfin, le lecteur aura sans doute été frappé de ces figures de prêtres qui se tiennent à droite et à gauche des Buddhas et des Bodhisattvas et que les inscriptions nous ont permis d'identifier de façons très diverses. Nous savons désormais que, dans les *maṇḍalas* d'Amitābha, ils représentent Bhaishajyarāja et Bhaishajyasamudgata, incarnations respectives de Vimalagarbha et de Vimalanetra; que, dans ceux de Çākyamuni et d'Avalokiteçvara, ils représentent Subhūti et Çāriputra ou Ānanda et Kāçyapa; mais nous les retrouvons aussi dans les *maṇḍalas* d'Avalokiteçvara et de Bhaishajyaguru.

Si ces figures de prêtres incarnent des personnages divers, ils prennent cependant un aspect d'ordre tantrique, car l'un apparaît comme un génie bénin, l'autre comme un génie terrible, et l'on voit que ces deux symboles de l'activité rédemptrice, pitoyable ou redoutable des Buddhas et des Bodhisattvas viennent revêtir des personnages historiques ou mythiques complètement étrangers quant à leur origine à ces idées tantriques.

Mais il y a plus. Cette figuration du génie bénin et du génie malin peut consister en deux assistants qui, sous une forme également bénigne, prennent l'aspect de ces *devas,* peuplant les *maṇḍalas.* J'ai signalé plus haut, dans un *maṇḍala* de Bhaishajyaguru (Ch. lii. 003, Pl. LVII), des assistants de ce genre. J'ai fondé cette identification sur une peinture de Touen-houang (Ch. lvii. 004, Pl. LXVI) où l'on voit seulement Avalokiteçvara entre deux assistants: ce n'est donc pas un *maṇḍala.* Ces deux assistants apparaissent sous la même forme bénigne, mais ils sont désignés chacun par une inscription très explicite.

善童子供養[時], le bon Kumāra, au moment où il adore.
惡童子供養時, le mauvais Kumāra, au moment où il adore.

Ce sont donc ces assistants que les Japonais appellent des Dōjin et qui incarnent l'activité bénigne ou terrible du Bodhisattva auquel ils sont attachés. Ce sont des figures proprement tantriques. Il est curieux de voir ici l'inscription évoquer des idées tantriques que la représentation plastique n'exprime pas encore. On peut se rendre compte maintenant de la double signification des assistants-prêtres des Buddhas et des Bodhisattvas. À leur personnalité historique ou légendaire est venue s'en ajouter une autre, toute mystique et qui dérive de ces idées désordonnées et monstrueuses de l'hindouisme, dont la fortune devait être si grande au Tibet. Elles avaient cependant à vaincre une telle résistance dans le Turkestan oriental et en Chine que la figuration démoniaque n'est pas arrivée à déformer les types plastiques et que, même, on peut les voir demeurer humains et purs sous l'inscription qui les désigne comme les proches parents des monstres tibétains.

Ce n'est pas, du reste, la seule manifestation tantrique dans les peintures de Touen-houang. Nous en avons vu des exemples dans les *maṇḍalas* d'Avalokiteçvara (Ch. lvi. 0019) avec les figures de Maheçvara et de Mahākāla ou bien avec les formes terribles de Vajrapāṇi (Ch. 00102; xxviii. 006; lvi. 0014; lvi. 0019). Dans l'une de ces peintures (Ch. xxviii. 006), nous avons même vu, aux pieds des Vajrapāṇi, le Roi-Esprit des Éléphants et le Roi-Esprit des Nāgas, agenouillés et domptés par la puissance de ces 'Protecteurs de la Religion'. On a vu que leur identification avait été possible grâce à une stèle étudiée par M. Chavannes et que celui-ci avait rapprochée de certaines figurations des grottes de Kong-hien.[41] Il est intéressant de remarquer ici qu'on retrouve ces mêmes Rois-Esprits des Éléphants et des Nāgas à Chötschö dans un fragment de fresque de Bäzäklik qui représentait certainement un *maṇḍala* d'Avalokiteçvara.[42] Les éléments qui subsistent montrent même que la composition en devait être fort développée.

XI

Les Maṇḍalas sur les stèles et les sculptures.

L'ordonnance générale des *maṇḍalas* nous apparaît donc maintenant comme déterminée dans ses éléments constituants. Leur figuration abondante, en dehors des figurants de troisième ordre qui se perdent dans la foule paradisiaque, est nettement déterminée. Ces peintures de Touen-houang nous ont livré maintenant tout ce qu'elles pouvaient donner de renseignements certains sur l'iconographie bouddhique. Il nous reste encore

[41] Chavannes, *Six Monuments de la Sculpture chinoise, Ars Asiatica,* ii. 15, et *Mission archéologique en Chine,* Planche CCLXXI, fig. 406.

[42] A. von Le Coq, *Chötschö,* Planche XXXII.

à montrer que les *maṇḍalas* de Touen-houang ne sont pas des éléments isolés, mais qu'ils se relient aux plus anciens monuments qui nous soient accessibles dans l'histoire et dans la constitution du panthéon somptueux du bouddhisme du Nord.

Les fresques de Chötschö constituent un premier lien. Nous y trouvons surtout des traces de *maṇḍalas* de Kouan-yin. Dans sa Planche XLV, en *e* et *c*, M. von Le Coq a reproduit des fragments de peintures sur soie dans lesquels on reconnaît sans peine la figuration d'un Avalokiteçvara aux onze têtes et aux mille bras. Dans la Planche XLVI, en *f*, c'est encore un fragment d'un Avalokiteçvara aux mille bras qui se trouve reproduit. Parmi les figures d'assistants qui ont été conservées, on reconnaît un Vajrapāṇi portant le foudre et la massue; derrière lui, un personnage portant une tiare à la manière sassanide, flanquée de deux ailes ouvertes, pourrait être un Vaiçravaṇa. Cela suffirait à faire deviner un *maṇḍala* d'Avalokiteçvara à grande ordonnance, mais un fragment de fresque reproduit dans la Planche XXXII sera bien plus démonstratif encore.

L'on y voit, dans les coins de droite et de gauche, deux Vajrapāṇi, l'un noir, l'autre blanc, brandissant leurs huit bras dans une auréole de flammes. Aux pieds de l'un, le Roi-Esprit des Éléphants, aux pieds de l'autre, le Roi-Esprit des Nāgas nous permettent d'y retrouver les Vajrapāṇis des *maṇḍalas* d'Avalokiteçvara. De l'autre côté, un assistant porteur d'offrandes. Au-dessus, on peut reconnaître encore Maheçvara monté sur un buffle blanc et Mārīcī montée sur le phénix. D'un bassin central surgissent des Nāgas qui soutiennent le trône de lotus sur lequel devait siéger sans aucun doute Avalokiteçvara. Tous les autres éléments sont en si étroite correspondance avec les *maṇḍalas* de Touen-houang que l'on ne pourrait avoir à cet égard la moindre hésitation.

Mais, avec les éléments de Chötschö, ni dans l'espace, ni dans le temps, nous ne sommes bien éloignés de Touen-houang et la comparaison la plus intéressante sera sans aucun doute celle qui nous transportera à Yun-kang et à Long-men. Or, sans sortir de Touen-houang, nous trouvons le trait d'union entre les sculptures et les peintures bouddhiques. On trouve, en effet, dans les chapelles creusées à la même roche, de véritables *maṇḍalas* mi-partie peints, mi-partie sculptés. Sir Aurel Stein a reproduit plusieurs photographies de ces groupes dans son ouvrage *Ruins of Desert Cathay*.[43] Dans sa fig. 161, on voit un Çākyamuni sculpté, appuyé contre le mur. Au plafond, au-dessus de lui, est peinte toute la partie supérieure du *maṇḍala*. À côté de lui, de part et d'autre, viennent ensuite: deux Bodhisattvas assistants peints sur le mur; deux prêtres sculptés en ronde-bosse, puis deux Bodhisattvas sculptés, puis deux Bodhisattvas peints, puis deux Lokapālas sculptés. C'est toute l'ordonnance centrale du *maṇḍala* qui se trouve ainsi reproduite. On en trouvera un nouvel exemple dans la fig. 200 (p. 222) où la partie peinte est plus abondante que la partie sculptée, et un autre, à la fig. 201 (p. 224) où, derrière le Buddha central, sont peints les arbres paradisiaques. Il importe peu que certaines figures de stuc soient refaites et modernes: c'est la façon de composer le *maṇḍala* qui importe ici et elle va nous aider à comprendre certaines représentations des grottes sculptées de Yun-kang et de Long-men.

Les stèles dites: 'Images à quatre faces', contemporaines des sculptures des grottes, nous montrent des *maṇḍalas* dont la composition est plus facilement lisible. Je retiendrai ici deux exemples seulement appartenant tous deux à l'époque des Wei.

L'un a été étudié et publié par M. Chavannes.[44] Il en a déjà été question. C'est une stèle à inscription de l'année 543. Elle représente un *maṇḍala* de Çākyamuni. Le Buddha est debout entre Ānanda et Kāçyapa et deux Bodhisattvas qui restent indéterminés. Je serais bien tenté d'y reconnaître deux formes d'Avalokiteçvara. En bas, aux deux coins du piédestal, on voit deux Vajrapāṇi. Sur les trois autres faces du piédestal, se développe la représentation des dix Rois-Esprits, dont nous avons déjà parlé et que nous avons vus représentés par le Roi-Esprit des Nāgas et le Roi-Esprit des Éléphants dans les *maṇḍalas* d'Avalokiteçvara. Nous les voyons ici soumis aux deux Vajrapāṇis dans un *maṇḍala* de Çākyamuni, ce qui ne fait que confirmer ces liens étroits dans la figuration des *maṇḍalas* de Çākyamuni et d'Avalokiteçvara dont on a eu déjà tant d'exemples.

Sur les tranches du monument sont sculptées deux figures de Buddhas. C'est ce qui me fait croire que l'inscription relative aux deux Kouan-yin, rapportée par M. Chavannes à la tranche de la stèle, devrait être rapportée aux deux Bodhisattvas assistants de Çākyamuni.[45] Sur la partie postérieure de la stèle, on voit

[43] Aurel Stein, *Ruins of Desert Cathay*, ii. London, 1912.

[44] *Ars Asiatica*, ii. Chavannes, 'Six Monuments de la Peinture chinoise,' 1917.

[45] Et cela malgré qu'une inscription: 'Le donateur des deux Bodhisattvas' leur ait déjà été, fort raisonnablement, du reste, attribuée par M. Chavannes. L'inscription relative aux deux Kouan-yin est très embarrassante, car d'après sa place dans l'inscription, elle devrait être appliquée à la tranche de la stèle et l'on trouve sur cette tranche non deux Bodhisattvas, mais deux *Buddhas*. La conclusion me semble être qu'il y a quelque désordre dans l'inscription.

Prabhūtaratna et Çākyamuni. La description et l'examen de la stèle montrent donc que la partie antérieure, les deux tranches et les quatre faces du piédestal constituent, ensemble, un *maṇḍala* de Çākyamuni dont l'ordonnance est analogue à celle des peintures de Touen-houang.

Le second monument auquel j'ai fait allusion est une stèle de l'année 551. Elle proviendrait de Si-ngan-fou dans le Chensi et se trouve actuellement à l'Université de Kyōtō. Elle a été publiée par M. Taki dans le *Kokka* (nº 270, 1912). Elle représente, elle aussi, un *maṇḍala* de Çākyamuni. Sur la face antérieure on voit Çākyamuni entre ses deux assistants-prêtres et ses deux assistants-Bodhisattvas. Deux lions sont accroupis de part et d'autre du trône de lotus. Sur le piédestal, on voit deux porteurs d'offrandes de part et d'autre du brûle-parfum, puis deux Vajrapāṇis. Une face seule étant reproduite, et le texte étant muet à ce sujet, on ne peut savoir si les trois autres faces du piédestal portent la représentation des dix Rois-Esprits. La tranche de droite de la stèle porte l'image de Samantabhadra, celle de gauche, l'image de Maitreya ; sur la face postérieure, on voit les trois Dīpaṅkaras. De nouveau les trois faces antérieures et latérales portent tous les éléments d'un *maṇḍala* ; il est même probable que, s'il avait été peint au lieu d'être sculpté, les trois Dīpaṅkaras seraient venus prendre place à la partie supérieure du *maṇḍala*.[4d] Dès lors, nous pouvons nous demander s'il n'en devrait pas être de même pour la représentation de Prabhūtaratna et de Çākyamuni dans la stèle précédemment étudiée. Les sculptures de Yun-kang et de Long-men vont nous répondre à cet égard.

La comparaison des sculptures de Yun-kang et de Long-men avec les *maṇḍalas* peints n'est pas toujours très facile. Le style, en effet, en est extrêmement différent. On est très proche ici des données des bas-reliefs gandhāriens ; le profil des Vihāras se retrouve plus ou moins transformé dans les motifs d'encadrements des figures et, d'autre part, les éléments du *maṇḍala* se développant parfois sur les quatre parois d'une chambre, les photographies prises par M. Chavannes, quelque systématiquement classées qu'elles aient pu être, ne permettent pas toujours de saisir un ensemble. Quoi qu'il en soit, et si l'on surmonte les difficultés d'un changement d'aspect assez radical, les identités de composition apparaissent.

L'ensemble qui rappelle de plus près l'ordonnance des *maṇḍalas* peints de Touen-houang est à Long-men, grotte S, paroi sud (Chavannes, *Mission*, nºs 240, 241 et 243). On y voit, comme figure centrale, un Çākyamuni assisté de deux Çramaṇas, de deux Bodhisattvas et de deux Vajrapāṇis. Au-dessus de la niche dans laquelle siège le Buddha, on a sculpté, sur quatre rangées, les Buddhas et les Bodhisattvas des régions paradisiaques. Dans deux losanges formant ornement, on découvre des figures volantes d'apsaras et, enfin, sur les bords de droite et de gauche, dans des séries d'encadrements délimitant bien nettement les scènes, on voit, sculptées en bas-reliefs, des scènes de *Jātakas* ou de la vie du Buddha Çākyamuni. La paroi nord de la même grotte S (Chavannes, *Mission*, nºs 342 et 344) comporte une composition exactement semblable. Nous avons donc ici deux *maṇḍalas* sculptés de Çākyamuni auxquels il ne manque rien, pas même les scènes marginales telles qu'on les trouvait dans les peintures.

La démonstration serait donc suffisante. Elle est assez intéressante cependant pour qu'à la lueur de cette première identification, nous poursuivions un examen rapide des grottes de Yun-kang et de Long-men.

À Yun-kang (Chavannes, *Mission*, nº 219) nous trouvons un *maṇḍala* de la prédication de Çākyamuni dans le ciel des Tushitas. Le Buddha est assis sur le trône des lions, dans une niche formée du profil d'un Vihāra. De chaque côté, à l'intérieur de la niche, quatre Bodhisattvas l'assistent. Dans l'auréole même, trois Buddhas de chaque côté viennent écouter la bonne parole. Dans le fronton, les deux premiers Buddhas de la rangée sont même agenouillés sur deux lignes de nuages qui s'échappent de la tiare de Çākyamuni et qui rappellent ces deux lignes symétriques de nuages sur lesquelles, dans les peintures, figurent les Buddhas des dix directions de l'espace ; sur la façade même du Vihāra sont sculptées des figures volantes d'apsaras. À Yun-kang encore (nº 247) on voit un Çākyamuni entre Samantabhadra à sa droite et Mañjuçrī à sa gauche, tandis qu'au-dessus un Bodhisattva assis entre deux Buddhas pourrait bien être Maitreya. Les parois de la niche de Çākyamuni sont chargées d'un grand nombre de figures de Buddhas et de Bodhisattvas, figurants ordinaires des *maṇḍalas*. Il semble qu'on ait ici une composition analogue à celle de la stèle étudiée par M. Chavannes dans *Ars Asiatica*.

[4d] Une stèle de 570–571, reproduite par M. Chavannes (*Mission*, nº 427), nous montre un *maṇḍala* de Çākyamuni dans lequel on voit les deux lions de part et d'autre du brûle-parfum et deux Vajrapāṇis, en bas ; Çākyamuni a comme assistants deux Çramaṇas et quatre Bodhisattvas. Au-dessus de lui on voit deux figures volantes d'apsaras. À la partie supérieure de la stèle, on trouve la représentation de la prédication de Çākyamuni.

Quant à des *maṇḍalas* qui associent la représentation du groupe de Prabhūtaratna et de Çākyamuni à celle de Çākyamuni lui-même, nous en avons de nombreux exemples dans les grottes.[47] Dans la grotte n° XII de Yun-kang (n° 249) et la grotte XX (n° 262), on en voit deux excellents exemples. Prabhūtaratna et Çākyamuni siègent en bas, dans une niche autour de laquelle sont sculptées les images des nombreux Buddhas et Bodhisattvas, qui les écoutent. Dans une représentation du même sujet (n° 203) ils sont même assistés de deux Bodhisattvas. Il semble en être de même dans la grotte XX. Au-dessus d'eux, dans une niche, on voit Çākyamuni, accroupi dans la grotte XII, assis sur le trône des lions dans la grotte XX. Il est accompagné dans toutes deux de Buddhas et de Bodhisattvas. Dans la grotte XX le fronton du Vihāra, qui lui sert de niche, est orné de figures volantes d'apsaras. La stèle dont nous avons parlé plus haut forme donc bien un tout complet et les figures de sa face postérieure doivent être associées à celles de sa face antérieure.

Les *maṇḍalas* sculptés de Çākyamuni sont encore nombreux. Dans l'une des grottes de Kong-hien, et précisément dans celle où M. Chavannes a relevé la présence des dix Rois-Esprits (n° 406), on trouve un *maṇḍala* de Çākyamuni (*Mission*, n° 415) accompagné de deux lions, de deux Çramaṇas, de deux Bodhisattvas et de deux Lokapālas. À Long-men on en retrouve de nombreux exemples (Chavannes, *Mission*, n°s 298 et 300). Dans une niche de Long-men, au bord de la route (*Mission*, n° 339), on voit un Çākyamuni sur le trône des lions, assisté de deux Bodhisattvas. Dans les cercles de l'auréole, on voit des Buddhas et des Bodhisattvas; au-dessus, des anges musiciens; tout cet ensemble rappelle de très près les éléments et la composition des peintures. Il en est de même ailleurs (*Mission*, n° 308) où, sur le trône même du Buddha, figurent deux petites figures d'orants et où, entre les Çramaṇas et les Bodhisattvas assistants, on voit deux Kumāras porteurs d'offrandes.

On a l'impression, du reste, que des grottes entières devaient former un *maṇḍala*. Dans la grotte Y de Long-men, la paroi du fond (*Mission*, n° 312) est occupée par un grand Buddha Çākyamuni assis sur le trône de la prédication. Sur les parois de droite et de gauche (nos 395 et 396) on voit deux Çramaṇas, deux Bodhisattvas et deux des quatre Rois. L'ordonnance générale du *maṇḍala* n'y est pas douteuse. Il en est de même à la grotte Pin-yang de Long-men. La paroi du fond (n° 286) est occupée par un Çākyamuni colossal pareil à ceux des *maṇḍalas* de Touen-houang.

Sur la paroi méridionale on voit un Çramaṇa et un Bodhisattva (n° 287). De même sur la paroi septentrionale (n° 289). Puis, si l'on revient à la paroi méridionale, on trouve un Buddha (n° 288) assisté de deux Bodhisattvas.[48] Il en est de même en face sur la paroi septentrionale (nos 289 et 290). Ce sont là ces répétitions symétriques du Buddha central avec ses propres assistants dont nous avons déjà vu des exemples caractéristiques sur les *maṇḍalas* peints de Touen-houang.

Il est inutile de pousser plus loin l'examen des planches publiées par M. Chavannes. Nous en avons assez dit pour prouver en toute évidence l'étroite parenté des *maṇḍalas* sculptés de Yun-kang et de Long-men et des *maṇḍalas* peints de Touen-houang. Cela nous reporte donc sans conteste au Ve et au VIe siècle et nous trouvons déjà fixée à cette époque l'ordonnance générale des *maṇḍalas*.

Cependant, il nous reste une remarque à faire. On aura observé que, soit qu'il s'agisse des stèles, soit qu'il s'agisse des grottes, nous rencontrons toujours des *maṇḍalas* de Çākyamuni. Cela signifie tout au moins que le Buddha historique jouissait dans le culte à cette époque d'une prédominance écrasante. Les Buddhas fabuleux, les Bodhisattvas mythiques, tiennent au contraire la plus large place dans les *maṇḍalas* de Touen-houang. Du Ve et du VIe au IXe et au Xe siècle, l'évolution qui s'est produite dans l'iconographie bouddhique a porté au premier plan des personnages divins sur l'évangile desquels, à la même époque, se fondaient précisément les sectes nouvelles. Telle est la conclusion à laquelle nous conduisent les rapprochements qui nous ont entraînés bien loin de Touen-houang.

Mais, en même temps, ils nous ont permis d'achever notre tâche. L'étude des *maṇḍalas* de la Mission Stein nous a donc révélé l'appareil des figurations bouddhiques dans les peintures qui comptent parmi les plus anciennes qui nous soient accessibles, soit pour la Chine, soit pour le Tibet. Nous y avons vu le Tantrisme s'exprimer discrètement dans les peintures purement chinoises, d'une façon plus accusée dans les peintures sino-tibétaines et, dans ces dernières, d'une manière qui faisait présager son développement postérieur. Des rapprochements avec les monuments antérieurs de Yun-kang et de Long-men nous ont montré comment les *maṇḍalas*

[47] Voir encore les nos 247, 249, 262.

[48] Le Bodhisattva à la gauche de ce Buddha se trouve sur la photo reproduite n° 287, le photographe ayant découpé le groupe.

somptueux de Touen-houang étaient l'aboutissement d'un mouvement qui, partant des données gandhāriennes où le Buddha historique prédomine, pousse de plus en plus au premier plan les Buddhas et les Bodhisattvas mythiques du Mahāyāna. Nous avons donc pu non seulement retirer des *maṇḍalas* de Touen-houang leurs données intrinsèques, nous avons pu les faire rentrer dans une histoire qui recouvre les hautes périodes du bouddhisme septentrional, durant lesquelles se constituent les types iconographiques de son panthéon.

IV

ESSAY ON THE ART OF THE TUN-HUANG PAINTINGS

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The paintings found at the Caves of the Thousand Buddhas are distinguished from the various other pictorial works (chiefly frescoes) which have been found in Eastern Turkestan, by the fact that among them are a certain number of examples of the central tradition of Chinese Buddhist painting. Khotan, Turfan, and other sites have yielded remains of pictorial art which are of fascinating interest and of extreme importance to the archaeologist and the student of religion. The style of art which these remains represent has its own merit and attractiveness; yet it is always of a provincial character.

But at Tun-huang we are within the borders of China; and the art of China during the T'ang period (to the latter part of which the great mass of the paintings discovered at the Caves may be referred) was at its grandest. Could the masterpieces of Wu Tao-tzŭ and his compeers be restored to us, we should probably rank this period with the greatest periods of creative art in the world's history. Unfortunately we have but meagre vestiges, and copies from renowned works, with which to eke out the glowing descriptions of Chinese historians of art. Hence the Tun-huang paintings are not only illuminating documents for the study of Mahāyāna Buddhism, but of yet greater—and indeed inestimable—value for the study of art, including as they do precious fragments of a period of great art, the productions of which have been almost entirely lost. It is true that only two or three of the paintings are fine enough in handling and workmanship to warrant our presuming them to be from the brush of a master. Most of them resemble, in quality, the kind of work produced in the workshop, say, of an artist like Botticelli—inferior in power but still redolent of the master's atmosphere and pervaded by reminiscence of his design, even when not actually painted from his cartoons. At any rate they suggest the greater work behind them in conception and design. We can get from these paintings an idea, probably not inadequate on the whole, of what Chinese Buddhist art was like in the ninth and tenth centuries.

Tun-huang is so remote, lying on the extreme western frontier of China, that it might have seemed reasonable to suppose the paintings found there to be the products of a local school. But on the other hand the position of the place on the great highway stretching across Asia from China to the Mediterranean, where it intersected the main route from Mongolia in the north to Tibet in the south, made it peculiarly accessible to influences both from east and west; and, in fact, the paintings found at the Caves, despite a monotony of subject-matter, exhibit a considerable variety of styles.

On the one hand we find purely Indian art represented by a group of small paintings which are probably Nepalese; on the other, a certain number of paintings which are entirely Chinese. Between these extremes there are pictures of an intermediate style which we may safely presume to be productions of the local schools of Turkestan, or in some cases a provincial Chinese school. Again, there are a few works which are Tibetan.

The Nepalese paintings are ten in number, and form a single series, each representing a Bodhisattva or divinity. The workmanship is rather coarse and clumsy; but they are of interest because, apart from the frescoes at Ajaṇṭā and a few other sites, there is almost nothing remaining of early Indian painting.

The art of Eastern Turkestan, founded on the style matured in Gandhāra and containing both Hellenistic and Indian elements, is now familiar to us through the discoveries of Sir Aurel Stein at Khotan and other sites, of Grünwedel and Von le Coq at Turfan, and of other explorers in these regions. The Tun-huang pictures are a further illustration of the mixed influences prevailing there. The large painting reproduced (Pl. LXIV) is an example. Within a vast orb of fire a vision is disclosed of Avalokiteśvara seated on the lotus, with an infinite number of eyes and hands, symbolizing the infinity of his compassion. Above are the deities of Sun and Moon; below, two Demon Kings wreathed in flame. Around the picture is a border on which are painted blossoms of flowers. Flowers also are dropping through the air; a favourite motive in Buddhist art. The colours are glowing, and the whole design has a half-barbaric grandeur.

Place this beside the Avalokiteśvara conducting a soul (Pl. LXXI), and a difference of mood, style, genius, is at once apparent. In place of a rather heavy symmetry in the composition and a kind of solid hardness in the drawing, we have a sense of suavity and flexile movement. Flowers seem really to be floating down the air, and the cloud on which the votaress follows the Bodhisattva coils up with a wavering motion. We feel the presence of the Chinese genius, with its instinct for living movement, and its love of sinuous line, and its reticent spacing. Nothing could be less Chinese than the disposition of the flowers on the border of the Turkestan picture (Pl. LXIV); there is something static in the design of them that reminds us rather of western art. And yet there is a Chinese element in the painting too; and this mixture of more or less of one ingredient or another is characteristic of most of the Tun-huang paintings. Some of the large paintings seem to be repetitions on silk of the broad style which is seen in the frescoes found at Tun-huang and other sites. We note in these, as in the picture just discussed, a system of modelling in two tones of colour to suggest relief and roundness in the figures. This surely denotes a western influence, for Indian, Chinese, and Japanese artists all instinctively eschew this emphasis. Yet so strong is the power of hieratic tradition, that this feature is found occasionally, not always, in Buddhist paintings both of China and Japan, and in the Indian frescoes at Ajaṇṭā. We have to realize that during the T'ang period there was a great general curiosity in China about the lands lying to the west, which had newly been again brought under the effective dominion of the Empire; there was also a great enthusiasm for Buddhism, and therefore anything which came from India brought with it a high prestige, and Indian models of Buddhist art were closely followed.

A most interesting testimony to this feeling is supplied by one of the Tun-huang silks (Pl. LXX; *Thousand Buddhas*, Pl. XIV). It is very large, though it is mutilated and was once still larger. On it are drawn with a brush a whole series of Indian statues of Buddhas and Bodhisattvas. This unique and precious document makes us think of the great Chinese pilgrims like Hsüan-tsang, who doubtless brought back from their pilgrimages to the holy places all that could serve for models to Chinese painters and sculptors of Buddhist faith. Indian imagery and symbolism, Indian ideals of form, were taken over by the Chinese masters; and therefore their Buddhist pictures show a striking contrast with their secular pictures: but, as the Tun-huang examples show, the Indian material was fused in the Chinese style, and a really new phase of Buddhist art was the result. Little, indeed, remains of Chinese painting which can be ascribed with any certainty to the T'ang period: but the T'ang masters were closely followed by the early painters of Japan, and the treasures preserved in Japanese temples give us a clue to the glories of T'ang religious art. Tun-huang has now given us another clue: and every one familiar with the Japanese Buddhist paintings must be struck with the closeness of resemblance in the style of these to the style of a group of the Tun-huang pictures, a resemblance so close as to prove that this group of pictures belongs to the central tradition of Chinese Buddhist art which passed over to Japan. It is true that in the Japanese *Butsu-yé* of early times we recognize the presence or influence of individual masters, who give the general style a certain impress of their own: and were an equally large number of Chinese Buddhist paintings extant, we should doubtless feel at once the power that masters of great genius like Wu Tao-tzŭ had exerted on the Buddhist tradition of art, especially in the manner of conceiving and designing certain typical subjects. Wu Tao-tzŭ's 'Death of Buddha', for instance, set the model for later painters in Japan as in China, who undertook to paint the same theme. All this makes for an elasticity and variety, very different from the hieratic stiffness and monotony characterizing the provincial schools of Turkestan.

It is of interest to note that, as M. Petrucci was the first to point out, certain motives which were thought to have originated with the Japanese appear in the Tun-huang pictures. For instance, the representation of Kṣitigarbha (Ti-tsang or Jizō) in the guise of a pilgrim with a shaven head and with a ringed staff in his hand is, we see from these pictures, already traditional in China. In Japanese *Butsu-yé* of quite modern times we

find just the same treatment of the subject of the Western Paradise as in the ninth- and tenth-century pictures of Tun-huang, where it was so favourite a theme.

The main point to grasp is that the tradition of Buddhist art which we first find formulated in Gandhāra, after assimilating certain minor elements (chiefly Iranian) in its passage across Eastern Turkestan, was transformed in China by the genius of that country's art, and was so transmitted to Japan. Those who fix their attention solely on the Indian and Hellenistic ingredients in this art may be inclined to conceive of the Buddhist pictorial tradition in China and Japan as merely a continuation of the art of Gandhāra. But, apart from the frescoes of Ajaṇṭā, it is only in China and Japan that Buddhist painting rises to greatness; and all that derives from Gandhāra in subject-matter and formula is subdued to the creative instinct of design by which the Chinese genius makes them its own.

For, before Buddhism was ever heard of in the empire, China had an original and powerful art, chiefly occupied with secular subjects. And the Tun-huang paintings, Buddhist as they are, throw light even on Chinese secular art. Look, for instance, at the three banners reproduced on Pl. LXXIV. The central one represents the Seven Treasures; and below are scenes of women washing the infant Buddha, and the Buddha's first steps. The two banners at the sides represent equally scenes from the Buddha legend; his conception, birth, etc. Is it not remarkable that everything here is translated into Chinese terms: types, dress, architecture, landscape? It is the same with all the Jātaka scenes which are painted as borders to the large pictures of Paradise, as in Pl. LVI. That these sacred scenes should be given a character so entirely Chinese testifies to the confident healthy vigour of Chinese art. And here, too, we have a precious indication of the style of T'ang painting in secular subjects.

This we hardly know from other sources. There are numberless descriptions of great pictures recorded, but of actual works which can be attributed to this period with any confidence, how very few have survived the succession of wars which have devastated China! Among those few, moreover, how little that shows us what figure-painting in secular subjects was like! The scenes from the Jātaka stories, therefore, which border many of the Tun-huang pictures, and the banners portraying similar subjects, are of extraordinary interest: and besides these we have a whole series of portraits of donors, painted under votive pictures, just as in early European art. Here are slight materials, it is true; but still they form a clue, and give us a kind of distant glimpse of the secular art of T'ang. The fact that a few of the pictures bear dates adds immensely to their value as documents. The Buddha attended by Planetary Divinities (Pl. LXXI) bears a date corresponding to A.D. 897; the Four Forms of Avalokiteśvara (*Desert Cathay*, ii. Pl. VIII) a date corresponding to A.D. 864. Other dates found are of the ninth or beginning of the tenth century; and comparison with the undated work leads us to the conclusion that the great majority of the paintings belong to the ninth century, though a few may possibly be earlier, and a few are later.

Of pre-T'ang painting we know nothing except the picture by Ku K'ai-chih, 'Admonitions of the Instructress in the Palace', now in the British Museum, and the 'Lo-shen fu' in the Freer collection in America, attributed to the same master. Even if these paintings be not allowed to be actually originals of the fourth century, they are demonstrably in the style and design of that time. The figures in the banner reproduced in the centre of Pl. LXXIV remind us, not altogether remotely, of Ku K'ai-chih's women with their stately yet gracious carriage and buoyant flexile movement. But the T'ang ideal of form is different; it is massive rather than slender, the lines are not attenuated. Of complex figure-design the Jātaka scenes, with their simple motives, indicate little, but we note in the best of them that beautiful use of spacing which is the peculiar idiom of Chinese art in its maturity. In the landscape backgrounds, slight as they are, we seem to see the kind of treatment on which the landscape of the old art of Japan, as shown in the scrolls of the Tosa School, was founded. And this is interesting, because it tends to show that even in this tradition, claimed to be exclusively Japanese, Chinese prototypes counted for much.

Returning now to the Buddhist element in these paintings, we may single out for particular mention the magnificent embroidery-picture reproduced on Pl. CIV. The reproduction gives inevitably a quite inadequate idea of the impressiveness of the original. In grandeur of design and beauty of colour this ranks as one of the very finest of the series; and we can imagine how splendid must have been the painting which it copied. The large picture of 'Two Forms of Avalokiteśvara' (*Thousand Buddhas*, Pl. XV) has similar qualities of design, though the actual workmanship of the painting is rather callous and heavy. But in two or three of the *Maṇḍalas* (see especially *Thousand Buddhas*, Pl. III, and *ibid.* Pl. I, II), the workmanship, in its subtle modulation of line and

sensitive expressiveness, matches the wonderful complex harmonies of the design. A small Avalokiteśvara with willow-spray (*Thousand Buddhas*, Pl. XX) is gem-like in its vivid orange and jade-green, burning from a sombre background. Two fragments of an immense arched composition (*Thousand Buddhas*, Pl. IV) have a splendid breadth and vigour allied to a deep religious sentiment, reminding us of early Italian frescoes. The little picture of Vaiśravaṇa crossing the Ocean (Pl. LXXII) is on the other hand in a miniature style, rich in fluid rhythms and glowing in colour. Such paintings as these make us feel how glorious must have been the Buddhist art of T'ang in the hands of its mightiest masters; while of its secular art also, as we have seen, the Tun-huang pictures give us precious glimpses.

Finally, we must notice the light which the collection throws on the mysterious art of Tibet. Among the paintings is one, painted on linen in distemper (*Thousand Buddhas*, Pl. XXXI), which is of the well-defined type familiar to us from examples brought from Tibet itself. As Tibetan power was dominant in the Tun-huang region from the middle of the eighth to the middle of the ninth century, we may suppose it to belong to that period: in that case it would certainly be one of the oldest, if not the oldest Tibetan painting known to us. Whether any of the other pictures represents the Tibetan style in a phase not yet matured and fixed we cannot say. There are, however, also a few outline drawings on paper (*Thousand Buddhas*, Pl. XXXII); and these add to our examples of early Tibetan art.

APPENDIX F

INVENTORY LIST OF MANUSCRIPTS IN SANSKRIT, KHOTANESE, AND KUCHEAN

PREPARED

BY

A. F. RUDOLF HOERNLE, Ph.D., C.I.E.

LATE INDIAN EDUCATIONAL SERVICE

[NOTE. The materials embodied in this list were received in a final form from Dr. Hoernle early in 1918. The typed press copy prepared from them was after his death in November of that year checked with the original under the kind supervision of Dr. F. W. Thomas.

Owing to various reasons difficulty was experienced about verifying the exact reading of all extracts quoted by Dr. Hoernle from particular MSS., mainly in Khotanese language. It being thus impossible to assure in this respect the degree of accuracy which that most painstaking collaborator would have aimed at, I have thought it advisable to reduce the reproduction of such quotations within narrow limits. For convenient reference by future students the original Inventory 'slips' as received from Dr. Hoernle's hand, as well as a typed copy of them, have been deposited at the India Office Library.—A. STEIN.]

I.—MANUSCRIPT REMAINS RECOVERED FROM KHĀDALIK

(See above, pp. 154 sqq.)

A.—SANSKRIT TEXTS AND FRAGMENTS

MANUSCRIPT REMAINS, ALSO BLOCKPRINT, BROUGHT BY MULLAH KHWĀJA AND OTHERS

Kha. 0011. Pōthī. Nearly complete fol., about 1" broken off either end, causing loss of fol. number. Full size probably was 16½" × 5¼". 10 ll. Skr. and Upright Gupta. Text identified by Prof. Barnett as from *Saddharma-puṇḍarīka*; corresponds to Kern ed., chap. xv. p. 319, l. 5 to p. 327, l. 9; but differs from it considerably. No. 515, Hoernle Reg. 14½" × 5¼".

Kha. 0012. b. Pōthī. Five frs. of 5 consecutive fols., Skr. and Upright Gupta, on thin, soft, whitish paper; much damaged. They measure about 6" × 3", being about middle ⅓ of complete fol.; full width must have been 3", with 6 ll. small script.

Skr. version of *Sutta Nipāta*, comprising Sutta 7–9, verses 814–47 of *Aṭṭhaka Vagga*; pp. 160–6 of PTS. (new ed.). No. 517, Hoernle Reg.

Kha. 0012. c. Pōthī. Fr. from R. end of a fol., 11 ll. Skr. and Upright Gupta; much damaged. Text not determined; but interlocutor is Subhūti. No. 518, Hoernle Reg. 5½" × 5".

Kha. 0013. a. Eleven frs. of Pōthī, three being large script, and eight smaller script; all from middle of fols.; two show string-hole; none show fol. number. They are obviously from a number (at least 4) of different Pōthīs. Some badly damaged, and almost illegible. Purchased from Badruddīn, Sept. 1906. All appear to contain portions of a *Prajñā-pāramitā* text. No. 519, Hoernle Reg.

Kha. 0013. b. Parts of 4 Pōthīs, Skr. and Upright Gupta: (1) A complete, though slightly damaged, fol., 16½" × 3½", with 5 ll.; fol. number broken off; but as the text shows, it must be the 2nd fol. Text practically commencement of

Saddharma-puṇḍarīka, and corresponds to Kern ed., chap. i. p. 1, l. 8 to p. 2, l. 8.

(2) A small fr., $3\frac{1}{2}'' \times 4\frac{3}{8}''$, with 8 ll., from L. of a fol. of another Pōthī of the *Saddharma-puṇḍarīka*, corresp. to Kern ed., xxi. pp. 261–2. No. 520, Hoernle Reg.

Kha. 0013. c. Two frs. of Pōthī, Skr. and Upright Gupta:

(1) about $\frac{2}{3}$ fol., $5\frac{1}{2}'' \times 2\frac{1}{2}''$, fol. no. 11; 4 ll.; portion of *Aparimitāyuḥ* (?) *Sūtra*.

(2) About $\frac{1}{4}$ fol., $1\frac{1}{2}'' \times 2\frac{1}{2}''$, 4 ll.; remains of a text, consisting of list of Buddhist terms. No. 521, Hoernle Reg.

Kha. 0014. a, b. Nineteen frs. of Pōthī:

(1) Kha. 0014. a, eight small frs., badly legible; not identified.

(2) Kha. 0014. b, eight small frs. of *Prajñā-pāramitā*.

(3) Kha. 0014. b, one small fr. of *Saddharma-puṇḍarīka*, ii. pp. 29–31.

(4) Kha. 0014. b, one fr., $7'' \times 3\frac{1}{2}''$, with 7 ll. on full width, from middle of fol., of unidentified text, perhaps *Ratnarāśi-sūtra*; treats of contrast between the Viraya of Māra and of Buddha.

(5) Kha. 0014. b, one fr., with fol. No. 111, and string-hole; almost illegible. No. 524, Hoernle Reg.

Kha. 0015. a, b. Four frs. of 3 Pōthīs, Skr. and Upright Gupta:

(1) Two frs. of large script Pōthī, with 11 ll. on full width of $8\frac{1}{2}''$. Apparently from a *Prajñā-pāramitā*.

(2) Kha. 0015. b, small script fr., $5\frac{1}{2}'' \times 2\frac{1}{2}''$, with 6 ll. Text not identified.

(3) Kha. 0015. b, small-script fr., $2\frac{3}{4}'' \times 2''$, with 5 ll., from L. end of fol. 104. Text not identified. No. 525, Hoernle Reg.

Kha. 0015. c. Sixty-nine small and numerous minute frs. of a number of Pōthīs, Skr. and Upright Gupta. No. 526, Hoernle Reg.

Kha. 0042. a, b, c. Fourteen frs. from 3 Pōthīs, purchased from Badruddīn, Sept. 1906; all in Skr. and Upright Gupta, of *Prajñā-pāramitā*:

(1) Two large, and two very small frs. of large script Pōthī. One larger fr. shows double concentric circle indicating end of section. Circle preceded and followed by reading *69* || *Dāmnapatti Attucasya* : ⸱ *Athāyuṣmāṃ Subhūti*. It indicates ending of 69th section and name of patron at whose cost the Pōthī was written; the latter in Khotanese language.

(2) One large fr., from L. half of fol., showing string-hole but not fol. number; with 13 ll. of small writing on full width of 9". Existing length $13\frac{1}{2}''$, full length probably was about 24". No. 527, Hoernle Reg.

Kha. 0043. Mass of rotten frs. of a Pōthī. Partly legible; in Skr. and Upright Gupta. No. 528, Hoernle Reg.

Badr. 0044. Block-printed sheet covered with 4 charms and Buddhist creed in Skr. and Upright Gupta; nearly illegible; also with 3 figs., apparently one male and two females, nearly invisible. Identified by Dr. Barnett. Purchased from Badruddīn, Sept. 1906. No. 529, Hoernle Reg. $15\frac{1}{2}'' \times 11''$.

PŌTHĪ LEAVES AND FRAGMENTS EXCAVATED AT RUINED SHRINE KHA. I

Kha. i. 1. Four minute frs. of Pōthī. Remains of 2–4 ll.; Skr. and Upright Gupta characters. No. 161, Hoernle Reg.

Kha. i. 2. Nine frs. of Pōthī. One $2'' \times 3''$, with remains of 4 ll.; Skr. and Upright Gupta; rest minute frs., also of another Pōthī. No. 162, Hoernle Reg.

Kha. i. 3. Four small frs. of Pōthī. About 2" or $2\frac{1}{2}''$ square, with 2–4 ll.; Skr. and Upright Gupta. Also ten minute frs.; all from a Buddhist canonical text. No. 163, Hoernle Reg.

Kha. i. 5. Three complete, and one fragmentary, fols. of a Pōthī. Former numbered (on obv.) 126, 127, 128 (6, 7, 8 being uncertain); fr. has distinctly the number 129. 9 ll. on page, Skr. and Upright Gupta. Letters in parts very much rubbed, and difficult to read. Pōthī appears to contain some version of the *Prajñā-pāramitā*; complete fols. expound doctrine of *śūnyatā* in detail, as in *Mahāvyutpatti*, No. 37, on fol. 126 *b*, ll. 3–7. No. 165, Hoernle Reg.

Kha. i. 6. Eight small frs. of several Pōthīs; Skr. and Upright Gupta. No. 166, Hoernle Reg.

Kha. i. 7. Two small and five minute frs. of several Pōthīs, Skr. and Upright Gupta. One of the former, *c.* $2'' \times 3''$, with remains of 5 ll., has the number 131, and must have belonged to an extensive manuscript of some Buddhist canonical work. No. 167, Hoernle Reg.

Kha. i. 11. a. Four minute frs. of 4 Pōthīs, Skr. in different hands of Upright Gupta. No. 168, Hoernle Reg.

Kha. i. 11. b. Two small frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 169, Hoernle Reg.

Kha. i. 14. Nine minute frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 171, Hoernle Reg.

Kha. i. 15. Nine minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 172, Hoernle Reg.

Kha. i. 17. Sixteen minute frs. of several Pōthīs. On three kinds of paper, in different hands; Skr. and Upright Gupta. No. 173, Hoernle Reg.

Kha. i. 19. Two small frs. of 2 Pōthīs, Skr. and Upright Gupta: (1) Whitish paper, $2\frac{1}{2}'' \times 2\frac{1}{2}''$, large letters; remains of 3 ll. of some *Prajñā-pāramitā*. (2) Soft whitish paper, $2'' \times 2\frac{1}{4}''$, small letters; remains of 3 ll. of some Buddhist work. No. 174, Hoernle Reg.

Kha. i. 21. Twenty-three minute frs. of several Pōthīs, Skr. and Upright Gupta; in various hands, and on different kinds of paper. No. 176, Hoernle Reg.

Kha. i. 24, 33, 35, 36. Two, practically complete, fols. of Pōthī, Nos. 4 and 5; 11 ll. on the page; also four minute frs. of Pōthī of *Saddharma-puṇḍarīka*, in Skr. and Upright Gupta script of a small but good hand. The text, fol. 4, begins in Kern ed. on p. 12, l. 15, and text, fol. 5, *ibid.* p. 17, l. 11. No. 178, Hoernle Reg. $17\frac{1}{2}'' \times 5\frac{1}{4}''$.

Kha. i. 26. Four frs. of Pōthī, *Vajracchedikā*, in Skr. and Upright Gupta: (1) One large fr. from R. side of fol., $5'' \times 4\frac{3}{4}''$, width complete, with 8 ll. small writing. Its text corresponds to *Anecdota Ox.* ed., p. 42, ll. 14–19 ff. (2) Three minute frs. No. 179, Hoernle Reg.

Kha. i. 27. b. Two frs. of Pōthī, $3\frac{3}{4}'' \times 1\frac{3}{4}''$, in Skr. and

Upright Gupta, from upper R. corner, and 2" × 1⅛" from lower R. corner, of a fol. of whitish paper, showing remains of 4 and 2 ll. from text of some Buddhist story. No. 181, Hoernle Reg.

Kha. i. 27. c. Seven very small frs. of different Pōthīs; Skr. and Upright Gupta. No. 182, Hoernle Reg.

Kha. i. 28. Seven frs. of Pōthī, on thin soft dun-coloured paper, bearing remains of 4 or 5 ll., in Skr. and large Upright Gupta chars., of Pōthī containing some Buddhist text. One fr. shows full width of fol. to have been 5¼". The length of another, from middle of fol., is 10¼", showing full length to have been not less than 20". No. 183, Hoernle Reg.

Kha. i. 32. Twenty-four minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 184, Hoernle Reg.

Kha. i. 36. Five minute frs. of several Pōthīs; Skr. and Upright Gupta. No. 185, Hoernle Reg.

Kha. i. 39. Large fr. of Pōthī, from L. lower corner of fol., of coarse, dun-coloured paper; 7 ll. in Skr. and Upright Gupta, of some Buddhist religious text. Also two minute frs., of soft, whitish paper, in Skr. and Upright Gupta. No. 187, Hoernle Reg.

Kha. i. 39. Small fr. of Pōthī, bearing remains of 8 ll. of writing in Skr. and Upright Gupta. Text is from *Vajracchedikā*, corresponding to *Anecd. Oxon.* ed., p. 42, l. 14, *iti . . . tad ucyate*, down to p. 44, l. 17, *sa ced.* No. 187, Hoernle Reg.

Kha. i. 40. Two small frs. of Pōthī, of irregular shape; 6 and 4 ll. in Skr. and Upright Gupta. Also six minute frs. apparently of same Pōthī. Some Buddhist (canonical?) work. No. 188, Hoernle Reg.

Kha. i. 41. Thirteen minute frs. of Pōthī, Skr. and Upright Gupta. No. 189, Hoernle Reg.

Kha. i. 45. a. Fr. of a fol. of Pōthī, probably one-third, R. end, bearing remains of 6 ll. in Skr. and Upright Gupta. Text consists of verses 11–18 from ch. xiv of *Suvarṇabhāsottama-sūtra*; see BTS. ed., pp. 65–6. No. 190, Hoernle Reg.

Kha. i. 45. b. Two small frs. of 2 Pōthīs, Skr. and Upright Gupta. One, 3" × 1¾", of coarse thick paper of small, narrow oblong Pōthī of 1¾" width, bears remains of 3 ll., with names of Tathāgata. No. 190 (cont.), Hoernle Reg.

Kha. i. 46. a. Thirty-five minute frs. of Pōthī, Skr. and Upright Gupta. No. 191, Hoernle Reg.

Kha. i. 48. b. About thirty-three minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 194, Hoernle Reg.

Kha. i. 49. b. Two frs. of 2 Pōthīs, also six minute frs., in Skr. and Upright Gupta, from Buddhist text. No. 196, Hoernle Reg.

Kha. i. 52. b. Seventeen minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 198, Hoernle Reg.

Kha. i. 54. Small fr. of Pōthī. Remains of 4 ll., in Skr. and Upright Gupta, of a *Prajñā-pāramitā*. Also two minute frs. of a different Pōthī, written in larger hand. No. 200, Hoernle Reg.

Kha. i. 55. Numerous minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 201, Hoernle Reg.

Kha. i. 57. Two frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 203, Hoernle Reg.

Kha. i. 58. b. Six frs. of two or more fols. of a very large Pōthī, Skr. and Upright Gupta. The fols. had the shape of long, narrow oblongs, whose width is preserved as 3½", with 5 ll. of writing. Two, from L. side, bear the numbers 148 and 544 resp. Text some Buddhist canonical work. Also seven minute frs. of another Pōthī. No. 205, Hoernle Reg.

Kha. i. 59. a. Eleven small frs. of 4 Pōthīs, Skr. and Upright Gupta. Fr. of one 2¼" + 3", with 5 ll., shows No. 104; fr. of another, with very large writing, shows No. 200 (?). No. 206, Hoernle Reg.

Kha. i. 60. Nine frs. belonging to 4 Pōthīs, on varying paper, and in various Upright Gupta hands, in Skr. One fr., *c.* 6" × 5½", shows 8 ll. large chars., from a *Prajñā-pāramitā* work. No. 207, Hoernle Reg.

Kha. i. 61. Numerous minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 208, Hoernle Reg.

Kha. i. 62. One small fr. of Pōthī, 3 ll. of large Upright Gupta chars. in Skr. of a *Prajñā-pāramitā* work; possibly belonging to Kha. i. 60. No. 209, Hoernle Reg.

Kha. i. 64. Numerous minute frs., probably of several Pōthīs, Skr. and Upright Gupta. No. 211, Hoernle Reg.

Kha. i. 66. Three large and four small frs. of 6 different Pōthīs, Skr. and Upright Gupta: (1) One large, 6½" × 2¼"; from R. side, with 4 ll.; interlocutor Mañjuśrī; apparently from *Saddharma-puṇḍarīka*. (2) One large, 5½" × 2¾"; from middle of fol., with remains of 5 ll.; from a *Prajñā-pāramitā*. (3) One large, 5" × 2"; completing text not determined. No. 212, Hoernle Reg.

Kha. i. 67. Two frs. belonging to two different Pōthīs; one in large, other in small Upright Gupta script; both Skr. The large script one bears on lower margin a line in small Cursive Gupta; perhaps in Khotanese. No. 213, Hoernle Reg.

Kha. i. 69. b. Numerous minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 215, Hoernle Reg.

Kha. i. 73. a. Numerous small and minute frs. of 3 Pōthīs, Skr. and Upright Gupta; also small piece of wooden board to which are sticking minute pieces of first Pōthī, containing Buddhist text. No. 217, Hoernle Reg.

Kha. i. 74. b. Two frs. of 2 Pōthīs, Skr. and Upright Gupta: (1) Fr. of a very large fol., with 7 ll. of large script, with remains of string-hole, indicating full width as 9". Probably some *Prajñā-pāramitā*. See Kha. i. 75. (2) Fr., 2" × 4", with remains of 9 ll. in small script; with numbers indicating verses; perhaps *Saddharma-puṇḍarīka*. No. 219, Hoernle Reg.

Kha. i. 74. c. Twenty-nine minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 221, Hoernle Reg.

Kha. i. 75. Large fr. of Pōthī. Fol. in large script, with remains of 12 ll., from middle. Possibly belongs to same Pōthī as Kha. i. 74. b. (No. 220); for script and size identical. Text some *Prajñā-pāramitā*. No. 222, Hoernle Reg.

Kha. i. 76. Five frs. of 3 Pōthīs, Skr. and Upright Gupta. Three small frs., in a script similar to, but rather larger than Pōthī Kha. i. 75; probably a *Prajñā-pāramitā*. No. 223, Hoernle Reg.

Kha. i. 77. Twenty-six minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 224, Hoernle Reg.

Kha. i. 78. a. Fr. of a fol. Remains of 6 ll. in Skr. and Upright Gupta, showing remains of string-hole; full width probably $3\frac{1}{2}''$. No. 225, Hoernle Reg.

Kha. i. 78. b. Sixteen minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 225, Hoernle Reg.

Kha. i. 79. b. Five minute frs. of Pōthī; *Prajñā-pāramitā* in Skr. and Upright Gupta. No. 228, Hoernle Reg.

Kha. i. 79. c., Kha. i. 131. One complete fol. (5), and three small frs. of another fol. of a Pōthī. Written in curiously corrupt Skr., and in Upright Gupta; e.g., nom. sing. in *u*, as *eku*, *utpalu*, &c.; *aghi* and *aghni* for *agni*; *patuma* for *padma*; *prāturbhavanti* for *prādur°*; *tittasya* for *tīrthasya*, &c.

Text is a story of King of Campā Nagarī and the Ṛṣi Suśīla or Śīlavanta. No. 229, Hoernle Reg.

Kha. i. 80. a. Numerous minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 230, Hoernle Reg.

Kha. i. 80. b. Eleven frs. of several Pōthīs, Skr. and Upright Gupta. No. 231, Hoernle Reg.

Kha. i. 81. a. Fr. of Pōthī (full width), $4'' \times 3\frac{13}{16}''$. From middle of a fol. in Skr. and Upright Gupta, much like that of Kha. i. 199. a (Nos. 232, 242, 356). 8 ll. Text from some Mahāyāna Sūtra (M. de la Vallée Poussin); name *Yaśomatī* occurs in it. No. 232, Hoernle Reg.

Kha. i. 81. b. Ten frs. of Pōthī, three large, seven very small, from one or more fols. of same Pōthī of large size and script; largest fr. $6\frac{1}{2}'' \times 3''$, with remains of 9 ll., in Skr. and Upright Gupta. Paper excessively thin. Text probably from a *Prajñā-pāramitā* (M. de la Vallée Poussin). No. 233, Hoernle Reg.

Kha. i. 81. c. Small fr. of Pōthī. From middle of a fol., with remains of 3 ll. in Skr. and Upright Gupta, of some Buddhist text. No. 234, Hoernle Reg.

Kha. i. 81. d. Three frs. of Pōthī. Coarse, flimsy paper, 5 ll. of writing in Skr. and Upright Gupta; practically illegible; from some Buddhist work. One fr. $8\frac{3}{4}'' \times 3\frac{5}{8}''$, with string-hole; width complete; full length probably $14''$. No. 234 (cont.), Hoernle Reg.

Kha. i. 82. b. Numerous minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 236, Hoernle Reg.

Kha. i. 85. Twenty-three frs. of Pōthī, from one or two large-sized fols.; Skr. and Upright Gupta. None show the full width; but one, $5'' \times 8\frac{1}{4}''$, has 11 ll., so that the full width was probably $10''$. Another shows a portion of the left-hand margin with the No. 394, which points to a very extensive Pōthī, probably containing the *Śatasāhasrikā Prajñā-pāramitā*. No. 237, Hoernle Reg.

Kha. i. 86. b. Ten frs. of three Pōthīs, Skr. and Upright Gupta. No. 239, Hoernle Reg.

Kha. i. 88. Two frs. of Pōthī, of very irregular shape, from two fols. in Skr. and Upright Gupta, both showing portions of left-hand margin, with the Nos. 3[9]4 and [39]5. Fols. possibly belonged to two different Pōthīs. No. 240, Hoernle Reg.

Kha. i. 89. b. Fr. of Pōthī. From R. end of a fol., with 7 ll. of writing in Skr. and Upright Gupta, closely resembling that of Kha. i. 81. a and Kha. i. 199. a. In point of size and script very like Kha. i. 206. b. Text some Mahāyāna Sūtra; names occur: *Siṃhagarjita*-pramukhāḥ, *Hiraṇyavatī*, *Kuśinagarī*, &c. No. 242, Hoernle Reg. $4\frac{1}{2}'' \times 3\frac{5}{8}''$.

Kha. i. 89. c. Seven frs. belonging to 4 Pōthīs, Skr. and Upright Gupta. Four frs. of a very large-sized Pōthī. The largest, $6'' \times 5''$, 7 ll., indicates full width of fol. to have been about $10''$ with 11 or 12 ll. The fol. No. mutilated, 2--, points to a very extensive Pōthī, probably a *Prajñā-pāramitā*. Name *Śāradvatīputra* occurs. No. 243, Hoernle Reg.

Kha. i. 90. Eleven frs. of 4 Pōthīs, Skr. and Upright Gupta. Three frs. of a large-sized Pōthī (the largest, $10\frac{3}{4}'' \times 3\frac{1}{2}''$ from middle of fol., but without trace of string-hole; and with remains of 5 ll.) belong to a *Prajñā-pāramitā*. Coarse, dark paper. No. 244, Hoernle Reg.

Kha. i. 91. b. Numerous small and minute frs. of numerous Pōthīs, Skr. and Upright Gupta. No. 246, Hoernle Reg.

Kha. i. 92. b. Fr. of Pōthī. From L. side of fol., with No. 6 on obv., $3\frac{1}{2}''$ full breadth, with 5 ll. in Skr. and Upright Gupta. The text is from *Saddharma-puṇḍarīka*, and corresponds to Kern ed., p. 22, ll. 2–12 (M. de la Vallée Poussin). No. 248, Hoernle Reg.

Kha. i. 93. a. Numerous small or minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 249, Hoernle Reg.

Kha. i. 93. b. Triangular fr. of Pōthī, from middle of fol., with remains of 6 ll. of writing in Skr. and Upright Gupta; some Buddhist religious text. No. 250, Hoernle Reg. $3\frac{1}{4}'' \times 3\frac{1}{4}''$.

Kha. i. 94. a. Twenty-three frs. of several Pōthīs, in Skr. and Upright Gupta. No. 251, Hoernle Reg.

Kha. i. 94. b. Four small, very irregular-shaped, frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 252, Hoernle Reg.

Kha. i. 94. c. Four small frs. of Pōthī, from middle, with remains of 4 ll. in Skr. and Upright Gupta. No. 253, Hoernle Reg.

Kha. i. 94. d. Five small frs. of Pōthī, incl. one from *Suvarṇabhāsottama-sūtra*, chap. v; Skr. and Upright Gupta. No. 254, Hoernle Reg.

Kha. i. 95. b. Five frs. of 3 Pōthīs; written on very coarse, stiff paper, in Skr. and Upright Gupta. All three appear to be portions of *dhāraṇīs*. Full width $2''$, $3''$, $4\frac{1}{2}''$, resp. No. 256, Hoernle Reg.

Kha. i. 95. c. Five very irregular-shaped frs. from 3 Pōthīs, Skr. and Upright Gupta. Three frs. from a *Prajñā-pāramitā* work. No. 257, Hoernle Reg.

Kha. i. 96. Five small frs. from five different Pōthīs, Skr. and Upright Gupta. One small fr., $2\frac{1}{2}'' \times 2\frac{1}{2}''$, remains of 6 ll., from the *Śūraṅgamasamādhi-sūtra*, giving the name of Dṛḍhamati Bodhisattva. No. 258, Hoernle Reg.

Kha. i. 97. b. Three frs. of two different Pōthīs, Skr. and Upright Gupta; both containing portions of a *Prajñā-pāramitā*. No. 260, Hoernle Reg.

Kha. i. 97. c. Ten frs. of 6 Pōthīs, Skr. and Upright Gupta. No. 261, Hoernle Reg.

Kha. i. 98. Nine frs. of 4 Pōthīs, Skr. and Upright Gupta. No. 262, Hoernle Reg.

Kha. i. 100. b or 180. b. Twenty-nine small frs. of 7 Pōthīs, Skr. and Upright Gupta. No. 265, Hoernle Reg.

Kha. i. 102. Three frs. of 3 Pōthīs, Skr. and Upright Gupta. One fr., 4½" × 3", from R. end of fol., with 5 ll. from *Saddharma-puṇḍarīka*, corresponding to Kern ed., pp. 52–4; with remains of verses 51–70, which, however, are numbered 98–107 in Kern ed. No. 267, Hoernle Reg.

Kha. i. 105. b. Fifteen small or minute frs. of 8 Pōthīs, Skr. and Upright Gupta. No. 270, Hoernle Reg.

Kha. i. 106. Twelve minute frs. of a birch-bark Pōthī, Skr. and Upright Gupta. No. 271, Hoernle Reg.

Kha. i. 108. b. Six frs. from 2 Pōthīs, Skr. and Upright Gupta. One large (8½" × 4½", from L. corner) and four small frs. from a large Pōthī, in large script, of a *Prajñā-pāramitā*. No. 274, Hoernle Reg.

Kha. i. 109. b. Very small fr. of roll, in Upright Gupta chars. of two different sizes. No. 276, Hoernle Reg. 2½" × 1½".

Kha. i. 112. Six frs. of 4 Pōthīs, Skr. and Upright Gupta. No. 279, Hoernle Reg.

Kha. i. 116. Fifteen frs. of five different Pōthīs, Skr. and Upright Gupta. No. 281, Hoernle Reg.

Kha. i. 117. b. Twelve small frs. of large Pōthī, Skr. and Upright Gupta. No. 283, Hoernle Reg.

Kha. i. 118. Eight frs. of 2 Pōthīs, Skr. and Upright Gupta; some scorched. No. 284, Hoernle Reg.

Kha. i. 120, 121. a. Five small frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 286, Hoernle Reg.

Kha. i. 121. b. Eighteen small frs. of 5 Pōthīs, Skr. and Upright Gupta. No. 287, Hoernle Reg.

Kha. i. 122. Three frs. of 2 Pōthīs, Skr. and Upright Gupta. No. 288, Hoernle Reg.

Kha. i. 123. Six minute frs., 3, 2, 1, respectively, of 3 Pōthīs, Skr. and Upright Gupta. No. 289, Hoernle Reg.

Kha. i. 125. Small fr. of large fol. of a large Pōthī, Skr. and Upright Gupta. Fr. is a narrow slip, from upper corner of L. end of fol., numbered 351; surviving width 5"; full width would be 8" or 8½", bearing 10 ll. Probably from a *Prajñā-pāramitā*. No. 291, Hoernle Reg.

Kha. i. 127. b. Right-side half-length frs. of Pōthī. Badly damaged, on coarse, dark, stiff paper; from nine fols., with remains of 4 ll., Skr. and Upright Gupta. One fol. shows the verse numbers on obv. 34, 35, 36, on rev. 37, 38; another has Nos. 54, 55, 63, 64, 65; apparently a medical or semi-medical treatise. No. 293, Hoernle Reg. 4¾" × 1¾".

Kha. i. 127. c. Seven frs. of 3 Pōthīs, Skr. and Upright Gupta. Five frs. in large writing from a text of *Prajñā-pāramitā*. No. 294, Hoernle Reg.

Kha. i. 128. a. Four frs. of 3 Pōthīs, Skr. and Upright Gupta. No. 295, Hoernle Reg.

Kha. i. 128. b. Six frs. of Pōthī, on very flimsy, whitish paper, Skr. and Upright Gupta. The largest, 5" × 6", shows them to have belonged to a large fol.; probably of a *Prajñā-pāramitā* (Prof. de la Vallée Poussin). No. 296, Hoernle Reg.

Kha. i. 129. b. Fr. of Pōthī, ¾ of fol. 22, with 9 ll., in Skr. and Upright Gupta. On obv., ll. 4–9, there are remains of 5 Triṣṭubh verses, showing that full length of the fol. must have been 15", with about 45 Akṣaras per line. The rev. refers to an address by Cunda-kumāra-putra to Buddha. Perhaps from a *Prajña-pāramitā*; cf. Kha. i. 206. b; also Nos. 232, 242, 356. No. 298, Hoernle Reg. 11¾" × 4½".

Kha. i. 130. Fr. of a large Pōthī; about ¼ of a large fol. of a *Prajñā-pāramitā* in Skr. and Upright Gupta. It measures about 9" sq., to the string-hole, with 12 ll. on its full width; the full length probably was 24". No. 299, Hoernle Reg.

Kha. i. 131. b. Five minute frs. of 3 Pōthīs, Skr. and Upright Gupta; one scorched. No. 301, Hoernle Reg.

Kha. i. 131. c. Six minute frs. of Pōthī, Skr. and Upright Gupta script. No. 302, Hoernle Reg.

Kha. i. 131. d. Four minute frs. of Pōthī, Skr. and Upright Gupta. No. 303, Hoernle Reg.

Kha. i. 132. Fr. of Pōthī; from middle of large fol., with remains of 9 ll., in Skr. and Upright Gupta. Perhaps from a *Prajñā-pāramitā*. No. 304, Hoernle Reg. 5" × 5½".

Kha. i. 131. a. Right half of a Pōthī fol., with 5 ll., much damaged, in Skr. and Upright Gupta. Also, five small frs. of 3 other Pōthīs, in Skr. and Upright Gupta. No. 306, Hoernle Reg.

Kha. i. 134. b. One complete fol. and six frs. of 2 Pōthīs, Skr. and Upright Gupta:

(1) A complete fol., No. 54, 20⅝" × 5⅜", with 7 ll.; contains *Saddharma-puṇḍarīka*, ch. ii. vv. 84*b*–94*a*, which, however, correspond to Kern ed., ii, 120*b*–129*a* (pp. 55^{xiv}–57^{iv}). There are, also, other textual differences, e.g. v. 93 is missing in Kern ed.

(2) R. quarter of a fol., 12½" × 6", with remains of 7 ll.; full width might have been 10", with 10 or 11 ll., large script. Also five minute frs. probably of same fol. Much damaged by numerous holes due to action of ink; badly legible; possibly also from *Saddharma-puṇḍarīka*. No. 307, Hoernle Reg.

Kha. i. 135. b. Three frs. of Pōthī, from large fol., in Skr. and Upright Gupta. Largest fr. from upper middle, 8½" × 5¼", with remains of 8 ll. Some Buddhist religious text. No. 309, Hoernle Reg.

Kha. i. 136. Numerous (about thirty-four) small, and minute, frs. of five or more Pōthīs, Skr. and varying Upright Gupta scripts. No. 310, Hoernle Reg.

Kha. i. 137. a., 138. a. Pōthī. About forty-four minute frs. of about 8 Pōthīs, Skr. and Upright Gupta. One small fr. No. 311, Hoernle Reg.

Kha. i. 150. Sixteen small or minute frs. of 5 Pōthīs, Skr. and Upright Gupta. No. 314, Hoernle Reg.

Kha. i. 151. Pōthī. Two small frs. from fol. of a Pōthī, Skr. and Upright Gupta. Text from a *Prajñā-pāramitā*. No. 315, Hoernle Reg.

Kha. i. 152. Set of six frs., about 2¼" × 2½", from middle of 6 apparently consecutive fols. of Pōthī in Skr. and Upright Gupta; with remains of 5 or 6 ll.

Text metrical, and belongs to a Buddha-stotra, probably of Mātṛceṭa; but it is too scrappy to read with confidence. No. 316, Hoernle Reg.

Kha. i. 153. Eighteen minute frs. of 7 Pōthīs, Skr. and Upright Gupta. No. 317, Hoernle Reg.

Kha. i. 154. Twelve minute frs. of 3 Pōthīs, Skr. and Upright Gupta. One, of eight frs., written on very thin, soft, whitish paper. No. 318, Hoernle Reg.

Kha. i. 155. Four small frs. of 3 Pōthīs, Skr. and Upright Gupta. No. 319, Hoernle Reg.

Kha. i. 156. One complete fol., No. 4, measuring 9½" × 1⅞"; also one small fr. from L. of fol. No. 8; and two small frs. from middle of certain fols.; in Skr. and Upright Gupta. Text from *Mahāpratyaṅgirā-dhāraṇī*. No. 320, Hoernle Reg.

Kha. i. 157. Small fr. of irregular shape, from upper L. side of a fol., with remains of 5 ll., Skr. and Upright Gupta. From some Buddhist text. No. 321, Hoernle Reg.

Kha. i. 159. Fifteen minute frs. of several Pōthīs, Skr. and Upright Gupta. No. 323, Hoernle Reg.

Kha. i. 161. Twenty-seven small and minute frs., one with No. 437, of about 10 Pōthīs, in Skr. and Upright Gupta. No. 325, Hoernle Reg.

Kha. i. 169. Three frs., in large script, of large-sized Pōthī in Skr. and Upright Gupta; with 12 ll. on page. The largest fr., very much torn, perhaps ⅔ from R. side of fol., measures 14¼" × 9", showing no string-hole. Text belongs to a *Prajñā-pāramitā*. No. 326, Hoernle Reg.

Kha. i. 171. b. Four frs. of 3 Pōthīs in Skr. and Upright Gupta; three frs. probably belong to *Saddharma-puṇḍarīka*. No. 329, Hoernle Reg.

Kha. i. 174. b. Small fr., with remains of 2 ll. from Pōthī in Skr. and Upright Gupta. No. 331, Hoernle Reg. 2½" × 1½".

Kha. i. 174. c. Large fr., without string-hole, with 8 ll. on full width, of a Pōthī in Skr. and Upright Gupta. Text, as identified by Prof. Barnett, is from *Saddharma-puṇḍarīka*, chap. ii, corresponding to pp. 56–7 of Kern's ed. No. 332, Hoernle Reg. 9" × 4⅜".

Kha. i. 175. Two frs., with large script, of a large-sized Pōthī, in Skr. and Upright Gupta, with 12 ll. on page. The larger fr., from the middle, measures 1' 2¾" × 9½". Text belongs to a *Prajñā-pāramitā*, and perhaps to the same Pōthī as Kha. i. 169 (No. 326). No. 333, Hoernle Reg.

Kha. i. 176. b. Twenty-two small frs. of about 5 Pōthīs in Skr. and Upright Gupta. No. 335, Hoernle Reg.

Kha. i. 177. Two frs., from middle, with string-hole, of 2 fols., with 8 ll. on page, of Pōthī in Skr. and Upright Gupta. Text, identified by Prof. de la Vallée Poussin, is from *Saddharma-puṇḍarīka*, ch. xxiv, sq., corresponding to Kern's ed., pp. 444^{xii}–446^{x}, and pp. 456^{i}–458^{v}, with end of ch. xxiv on obv. l. 5. See No. 405. No. 336, Hoernle Reg. 6" × 4¾".

Kha. i. 178. A number of frs. of a Pōthī in Skr. and Upright Gupta. Paper very dark; writing is visible, but very difficult to read, and owing to fragility of paper, it is impossible to detach and number the frs. There are remains of 8 ll. to the page, in large script, pointing to a large-sized Pōthī. No. 337, Hoernle Reg.

Kha. i. 179. Ten frs. of 6 Pōthīs in Skr. and Upright Gupta. No. 338, Hoernle Reg.

Kha. i. 180. Small irregular-shaped fr. from Pōthī in Skr. and Upright Gupta, with remains of 6 ll. No. 339, Hoernle Reg.

Kha. i. 182. b. Twenty-one small frs. of 5 Pōthīs in Skr. and Upright Gupta. No. 341, Hoernle Reg.

Kha. i. 183. Two separate frs., from the middle and R. end, of same fol. of Pōthī in Skr. and Upright Gupta. Remains of 7 ll. are preserved.

Text identified by Prof. de la Vallée Poussin as from *Buddhacarita*. See *J.R.A.S.*, 1911, p. 770. The 7th l. on rev. of R.-end fr. contains end of 9th Sarga; 5th l. has verse number 84. No. 342, Hoernle Reg.

Kha. i. 185. Thirty-nine small frs. from R. end of fols. of Pōthī in Skr. and Upright Gupta. They measure no more than 2" × 2¾", with remains of 4 ll. of 6 Akṣaras. The text seems to be a combination of prose and verse. Consecutive verse numbers in two frs. prove that full width of fol. can have been no more than 3", with 4 ll. upon it; loss, therefore, not in width, but in length, which may have been about 12". The frs. are much smudged owing to damp, and hence rather illegible. Identity of text not determined. No. 344, Hoernle Reg.

Kha. i. 185. c, 186. Three frs. of Pōthī in Skr. and Upright Gupta. Two of them, measuring 6¼" × 2¼", are from the middle of two consecutive fols.; one of the two preserving portion of string-hole and its circle, facing ll. 3 and 4. Both preserve portions or traces of 6 ll., which, as text shows, was full number of ll. on page. Full width of the fol., accordingly, must have been 2½", and full length probably 11" or 12". The text is from an early recension of *Saddharma-puṇḍarīka*, which differs considerably from ordinary text as in Kern's ed., ch. x, pp. 224–6. See No. 405. No. 345, Hoernle Reg.

Kha. i. 187. b. Forty small frs. of 4 Pōthīs in Skr. and Upright Gupta. No. 347, Hoernle Reg.

Kha. i. 188. Packet of rotten frs. of Pōthī in Skr. (?) and Upright Gupta. No. 348, Hoernle Reg.

Kha. i. 189. Twenty-seven frs. of 8 Pōthīs in Skr. and Upright Gupta. Among them (1) three frs. of *Śūraṅgama-samādhi* (Dṛḍhamati). (2) Eight frs. of a *Prajñā-pāramitā*. No. 349, Hoernle Reg.

Kha. i. 191. Large triangular fr., with remains of 9 ll., from middle of fol., of a Pōthī in Skr. and Upright Gupta. Perhaps *Prajñā-pāramitā*. See No. 351. No. 350, Hoernle, Reg. 8" × 5½".

Kha. i. 192. Large fr. of Pōthī in Skr. and Upright Gupta; with remains of 11 ll., and inscr. on one side only, either final or initial fol. Probably of same Pōthī as No. 350. No. 351, Hoernle Reg. 5½" × 6".

Kha. i. 196, 199. c. Two large frs. of a *Prajñā-pāramitā*, in Skr and Upright Gupta, measuring 8" × 9" and 5½" × 5¼", from middle of fol., with remains of 13 ll. of large script on full width of 9". No. 353, Hoernle Reg.

Kha. i. 197. A number of broken rotten frs. of about 10 fols. of a Pōthī in Skr. and Upright Gupta. They are sticking together, but might be read if separated with care. No. 354, Hoernle Reg.

Kha. i. 199. a. Complete leaf, No. 242, of Pōthī in Skr. and Upright Gupta, with 8 ll. Also a small slip, 4¾" × 1",

from lower R. corner of another fol. of same Pōthī. Script very like that of Kha. i. 81. a; different Pōthī, $3\frac{13}{16}''$ wide. See also Nos. 232, 242.

Final leaf of Pōthī, with only 2 ll. on rev. marked by rosette. Name of text is *Sarvavaitulyasaṃgha-sūtra*; interlocutor *Mannyuśiri* (sic). No. 356, Hoernle Reg. Pl. CXLIV.

Kha. i. 199. b. Two frs., L. end $6\frac{1}{4}'' \times 2\frac{3}{8}''$ and R. end $3\frac{1}{2}'' \times 2\frac{3}{8}''$, of fol. of Pōthī in Skr. and Upright Gupta, with fol. No. 12, and 4 ll. on page, in *śikhariṇī* verses, which shows that about 9 or 10 Akṣaras are lost between the two portions, the whole fol. being about 1′ long.

According to Prof. de la Vallée Poussin, from *Guṇāparyanta-stotra*; see *J.R.A.S.*, 1911, p. 1064 (in obv. l. 4 read °*kleśaśca* for °*klebśabda*). No. 357, Hoernle Reg.

Kha. i. 199. c. Two frs., from middle, possibly of same fol., of large Pōthī in Skr. and Upright Gupta, preserving remains of 6 ll., and numeral 5 in topmost l. No. 358, Hoernle Reg.

Kha. i. 200. a. Four small frs. of 3 Pōthīs in Skr. and Upright Gupta. No. 360, Hoernle Reg.

Kha. i. 200. b. Three frs., one large, $15'' \times 5\frac{1}{4}''$, two minute, of a very large Pōthī in Skr. and very large Upright Gupta; with remains of 7 ll. The text belongs to *Prajñā-pāramitā*. No. 361, Hoernle Reg.

Kha. i. 200. c. Fr., $5'' \times 3\frac{3}{8}''$, from L end of fol., with string-hole, No. 4, and 7 ll. of writing, of a Pōthī in Skr. and Upright Gupta. On its text, Prof. de la Vallée Poussin remarks, 'Buddha and Ānanda [in converse] on giving of food and *vihārasvāmin*'. No. 362, Hoernle Reg.

Kha. i. 201. Four small frs., from middle of large fol., with large script, with remains of 3 or 4 ll.; on one a portion of containing circle of string-hole. Stiff, brown, brittle paper. No. 363, Hoernle Reg.

Kha. i. 202. Large fr., dun-coloured, of very thin, flimsy paper, from L. side of fol., with string-hole, but without margin and number; measuring $7\frac{1}{4}'' \times 3\frac{5}{8}''$ (full width); with 6 ll. of writing in Skr. and Upright Gupta.

Text is in verses, none of which are complete; but the Nos. 44, 47, and 50 occur. No. 364, Hoernle Reg.

Kha. i. 203. b. Four small frs., from middle of fol. (2 with portion of string-hole circle), of 4 different Pōthīs in Skr. and Upright Gupta.

Also six minute frs., of hard, brittle, brown paper, with remains of 5 ll. in Skr., writing of an earlier type, and from an earlier canonical work. No. 366, Hoernle Reg.

Kha. i. 203. c. Two small frs., in Skr. and Upright Gupta; one belonging to a fol. 732, probably of a *Prajñā-pāramitā*. This may be final fol. of work, as it has an apparently concluding remark beginning with *siddham*. No. 367, Hoernle Reg.

Kha. i. 204. Twenty-five small frs., apparently belonging to 3 Pōthīs, in Skr. and Upright Gupta. No. 368, Hoernle Reg.

Kha. i. 205. b. Nine frs. of 3 Pōthīs in Skr. and Upright Gupta: (1) Six small frs. of large Pōthī, in large script, of *Prajñā-pāramitā*. One, $3\frac{1}{4}'' \times 3''$, with 5 ll., has the number 258. (2) Two minute frs., with remains of 2 ll. (3) A fr., $4\frac{3}{4}'' \times 3\frac{3}{4}''$, from L. end, with string-hole and No. 10, with 6 ll. of a syllabary. Size of the entire fol. was apparently $9\frac{1}{2}''$ or $10'' \times 3\frac{1}{4}''$; the string-hole as usual being in the middle of the L. half. No. 370, Hoernle Reg.

Kha. i. 206. b. Thirty-four frs. of 4 Pōthīs, in Skr. and Upright Gupta, incl.: (1) Six frs. of 2 fols. The largest, $6\frac{3}{4}'' \times 2\frac{1}{4}''$, about $\frac{1}{2}$ fol. from L. end, with string-hole and fol. No. 169, shows that it belonged to a very extensive Pōthī, with 7 ll. on page, as shown by another fr., $1\frac{1}{2}'' \times 3\frac{1}{2}''$ (full width). These two frs. contain story of Cunda, the *Kumāraputra*, in conversation with Buddha; cf. Kha. i. 89. b; 129. b. (2) Sixteen frs. of a large (*Prajñā-pāramitā*) Pōthī in large script. No. 372, Hoernle Reg.

Kha. i. 207. Two minute frs., apparently of a roll, inscr. on one side with traces of 2 ll. in Skr., in large Upright Gupta chars., and on other with remains of two columns of Chinese chars. There is a similar fr. in Kha. i. 305. a; but there Gupta script is smaller, and language Khotanese. No. 373, Hoernle Reg.

Kha. i. 209. Sixteen frs. of 7 Pōthīs in Skr. and Upright Gupta; incl. seven frs. in large script, with name of Pūrṇamaitreyaṇī-putra, perhaps from *Prajñā-pāramitā*. No. 375, Hoernle Reg.

Kha. i. 210. Two small frs. of large Pōthī in large script, in Skr. and Upright Gupta; portion of a *Prajñā-pāramitā*. No. 376, Hoernle Reg.

Kha. i. 211. b. Eight minute frs., six and two respectively, of 2 Pōthīs in Skr. and Upright Gupta. No. 378, Hoernle Reg.

Kha. i. 212. Four frs. of 2 Pōthīs in Skr. and Upright Gupta, incl. two large frs., $6\frac{1}{4}'' \times 6\frac{1}{2}''$, with 10 ll. much eaten by acid ink, and $7'' \times 5''$ with 7 ll. of large script; probably from a *Prajñā-pāramitā*, with the names of Subhūti and Śāradvatīputra. No. 379, Hoernle Reg.

Kha. i. 213. Forty-five small or minute frs. of 9 Pōthīs in Skr. and Upright Gupta, incl. four large script frs. of *Prajñā-pāramitā*, and eleven frs., mostly triangular, of as many consecutive fols., perhaps of *Saddharma-puṇḍarīka*. No. 380, Hoernle Reg.

Kha. i. 214. b. Complete fol., numbered 39 on obv., with 5 beautifully written ll., from the beginning of chap. ii of *Saddharma-puṇḍarīka*, corresponding to Kern ed., p. 30, l. 3 to p. 31, l. 5, but with many variant readings. No. 382, Hoernle Reg. $16\frac{3}{4}'' \times 3\frac{3}{4}''$.

Kha. i. 215. a. Fr. from R. end of a fol., with 9 ll., of Pōthī of *Saddharma-puṇḍarīka*, in Skr. and Upright Gupta. The surviving text commences in Kern ed., ch. xviii, p. 361, l. 13, and ends on p. 364, l. 12; but the verses in our text are numbered 1–20, not 22–40, as in the Kern ed. The figures 4, 5 stand on obv. ll. 5, 6, and the figs. 10 and 16 on rev. ll. 1 and 6; the corresponding figs. in Kern ed. are 25, 26, 36, 37. The text contains some striking variants.

The existing Akṣaras on the average are 20; the lost Akṣaras, 57; total 77 on full l. Existing length of l. is about 5″, full length must have been about 1′ 7″, and the full fol. $1'\ 7'' \times 5''$; hence the surviving fr. is about $\frac{1}{4}$. No. 383, Hoernle Reg. $5\frac{1}{4}'' \times 4\frac{3}{8}''$.

Kha. i. 215. b, 216, 217. Numerous minute frs. of several Pōthīs in Skr. and Upright Gupta. No. 384, Hoernle Reg.

Kha. i. 219. Eight small frs. of 5 Pōthīs in Skr. and Upright

Gupta, incl. (1) fr., $5\frac{3}{8}'' \times 2\frac{3}{8}''$, from middle of lower margin, of a fol.; with remains of 3 ll., from beginning of chap. xxi of *Saddharma-puṇḍarīka*, corresponding to Kern ed., p. 395, l. 2. (2) Two frs. in very large script, perhaps from a *Prajñā-pāramitā*. No. 388, Hoernle Reg.

Kha. i. 222. a. Twenty-three frs. of 6 Pōthīs in Skr. and Upright Gupta, incl. (1) seven large script frs. of *Prajñā-pāramitā*; (2) eight frs., apparently from the *Ratnadhvaja-sūtra*. No. 390, Hoernle Reg.

Kha. i. 222. b. About $\frac{1}{3}$ of a Pōthī fol., from its L. end, with string-hole, fol. No. 2, with 5 ll. writing in Skr. and Upright Gupta. Apparently a *dhāraṇī*. No. 391, Hoernle Reg. $5'' \times 2\frac{1}{2}''$.

Kha. i. 223. b. Forty minute frs. of about 7 Pōthīs in Skr. and Upright Gupta. No. 392, Hoernle Reg.

Kha. i. 223. b. Four frs., about $1\frac{1}{2}'' \times 3''$, from the R. end corner of 4 fols. of Pōthī in Skr. and Upright Gupta; with remains of 5 ll., in good, black, thick writing. Two of them, along the margin, show the numerals 2, 4, 6, 8, each facing a l. Also a minute fr., possibly from the same Pōthī. No. 393, Hoernle Reg.

Kha. i. 224. Seven small frs. of 5 Pōthīs in Skr. and Upright Gupta. No. 394, Hoernle Reg.

Kha. i. 300. b. Thirteen small frs. of 3 Pōthīs in Skr. and Upright Gupta, incl. fr. with the name *Vimalajāmbūnada*, a future Tathāgata; apparently a story about that Tathāgata. No. 396, Hoernle Reg.

Kha. i. 301. b. About $\frac{3}{4}$ of Pōthī fol., $1\frac{3}{4}'' \times 3\frac{3}{4}''$, from R. end, with string-hole, and 6 ll. writing in Skr. and Upright Gupta. Text from *Suvarṇabhāsottama-sūtra*, which is named on the 5th l. See Kha. i. 306. c. Also four minute frs. of another Pōthī, in larger script. No. 398, Hoernle Reg.

Kha. i. 302. b. Small fr. of Pōthī, with remains of 8 ll. writing in Skr. and Upright Gupta. From *Prajñā-pāramitā*. No. 400, Hoernle Reg. $5\frac{3}{4}'' \times 4''$.

Kha. i. 303. b. Ten frs. of 6 Pōthīs in Skr. and Upright Gupta, incl. (1) small fr., $3\frac{1}{2}'' \times 2\frac{1}{2}''$, with string-hole, fol. No. 55, and 6 ll., of *Śūraṅgamasamādhi-sūtra*, showing name of Dṛḍhamati; (2) fr. $4\frac{1}{2}'' \times 4\frac{1}{4}''$, on stiff paper, with 8 ll., perhaps of *Saddharma-puṇḍarīka*. No. 402, Hoernle Reg.

Kha. i. 304. Three frs. of 3 Pōthīs in Skr. and Upright Gupta. Also numerous minute, large script frs., sticking together. Among former (1) small fr., $3'' \times 2\frac{1}{2}''$, with 5 ll., from text of *Ratnarāśi-sūtra*. (2) A large script fr. from middle of a broad fol., with string-hole, showing remains of 9 ll. of a *Prajñā-pāramitā*. No. 403, Hoernle Reg.

Kha. i. 305. b. Fourteen frs. of 5 Pōthīs in Skr. and Upright Gupta: (1) 6, 3, 3, 1 frs. respectively of 4 Pōthīs. (2) One small fr., $3\frac{1}{4}'' \times 2\frac{1}{2}''$, from the upper L. corner of a fol., with remains of 5 ll., and the fol. No. 209 on the rev. and facing the space between the 4th and 5th ll. The complete width of the fol. must have been 5″, with 8 ll., involving probably a complete length of about 1′ 3″. Surviving text from end of 24th and beginning of the 25th chap. of the *Saddharma-puṇḍarīka*, corresponding to Kern ed., p. 456, l. 8 to p. 457, l. 9, from which, however, it considerably differs. See No. 336, where the two texts of same two chaps. agree; on the other hand, see No. 345, where the two texts similarly differ. No. 405, Hoernle Reg.

Kha. i. 306. c. Two large frs. of 2 Pōthīs in Skr. and Upright Gupta script: (1) a large script fr., from L. half of a fol., preserving full width of 9″ with 12 ll.; probably belonging to a *Prajñā-pāramitā*. (2) about $\frac{3}{4}$, from R. end of a fol., $11\frac{3}{4}'' \times 3\frac{3}{8}''$, with 5 ll. of laudations of the *Suvarṇabhāsottamasūtrendrarāja*, being apparently the final leaf of a Pōthī of that Sūtra. For another Pōthī of 6 ll. see No. 398. No. 408, Hoernle Reg.

Kha. i. 306. d. Fr. of brittle brown paper, with remains of 6 ll., in Skr. and Upright Gupta; contains jargon of a *dhāraṇī*. No. 409, Hoernle Reg. $6\frac{1}{2}'' \times 3''$ (full width).

Kha. i. 307. a. Complete fol., with No. 31 on obv. margin, and 6 ll. of writing in Skr. and Upright Gupta; covered with jargon of a *dhāraṇī*, commencing with: l. 1, *Siddham Namo buddha-dharma-saṃghāya syād yathedaṁ dumire bhūramire*, &c. and ending on rev. l. 5, *puruṣa-gāthani puruṣabale piṁgale naṅgālāyane hili hili hilini pigale°*, &c.

Kha. i. 307. a., i. 316. Two frs. of Pōthī in Skr. and Upright Gupta; one being a nearly complete fol. No. 5, $12\frac{1}{2}'' \times 2\frac{1}{2}''$, with 4 ll.; the total length being about 14″. The other is L. end, $4\frac{1}{2}'' \times 2\frac{1}{2}''$, of fol. No. 17, including the circle of the string-hole. The text is some *dhāraṇī*, apparently ending on fol. 17. On fol. 5 are salutations to a series of Tathāgatas; Vajraratnanābhi; Saṃghabaladhārin; Dharmadhātuprabhāsa, &c. No. 410, Hoernle Reg.

Kha. i. 307. b. Eight frs. of 4 Pōthīs in Skr. and Upright Gupta, incl. a large script fr., $12'' \times 9''$, and some minute pieces of fol. No. 230, with 12 ll.; containing a disquisition on various kinds of samādhi; apparently belonging to a *Prajñā-pāramitā*. See No. 423. No. 411, Hoernle Reg.

Kha. i. 309. a. 2. Three small frs. of large script Pōthī in Skr. and Upright Gupta. They may belong to a *Prajñā-pāramitā*. No. 413, Hoernle Reg.

Kha. i. 309. b. 2. Two frs. of fol., showing remains of 7 small script ll. of Pōthī in Skr. and Upright Gupta. In one of them Kaśyapa is addressed as in the *Ratnarāśi-sūtra*. No. 415, Hoernle Reg.

Kha. i. 309. b. 3. Four frs. of 3 Pōthīs in Skr. and Upright Gupta, incl. two frs. of a Pōthī of *Prajñā-pāramitā*. No. 416, Hoernle Reg.

Kha. i. 311. a. Two frs. of 2 Pōthīs in Skr. and Upright Gupta, incl. a large fr., $10\frac{3}{4}'' \times 5''$, put together of 3 separate pieces, from middle of a large fol., showing portions of string-hole circle, and of 8 ll. of writing. The text is from end of 19th and beginning of 20th chap. of the *Saddharma-puṇḍarīka* corresponding to Kern ed., p. 383, l. 5 to p. 386, l. 4. From a comparison with the latter it is seen that a full l. must have held 48–50 Akṣaras, and the full size of fol. must have been about $1'\,10'' \times 5''$. No. 418, Hoernle Reg.

Kha. i. 311. b. Three small frs. from middle of 2 fols. of 2 different Pōthīs in Skr. and Upright Gupta. No. 419, Hoernle Reg.

Kha. i. 314. Seven large script frs. of 1 or 2 fols. of a Pōthī in Skr. and Upright Gupta. One of them preserves fol.

No. 390; probably from a *Prajñā-pāramitā*. No. 420, Hoernle Reg.

Kha. i. 315. Five frs. of 3 Pōthīs in Skr. and Upright Gupta. No. 421, Hoernle Reg.

Kha. i. 316. a. Two small and three minute frs. of 4 Pōthīs in Skr. and Upright Gupta, incl. 1 small fr. in good small script from middle of fol., with remains of 6 ll., apparently verse. Name of Rāhula occurs in l. 6; *asaṃkhyeya-kalpa-koṭi* in l. 5. No. 422, Hoernle Reg.

Kha. i. 316. b, 317. a. Two frs., about 4″ × 7″ (full width), from L. and middle of fol., with No. 352, 11 ll. on page, and showing end of 55th chap. of a *Prajñā-pāramitā*. See No. 411. No. 423, Hoernle Reg.

Kha. i. 317. b. Two frs., about $5\frac{1}{4}''\times 3\frac{3}{4}''$, of exactly the same shape, from middle of 2 consecutive fols. of a Pōthī in Skr. and Upright Gupta. Both show encircled string-hole, and remains of 5 ll. Thin, very soft paper; writing in places difficult to read. Text is from 19th chap. of *Saddharma-puṇḍarīka*, and corresponds to Kern ed., p. 380, l. 3 to p. 381, l. 12; but shows very considerable differences. A much shorter, and clearly a much earlier, recension of text; similar to that of No. 345. No. 424, Hoernle Reg.

Kha. i. 319. c. Pōthī. Ten small frs. of 6 Pōthīs in Skr. and Upright Gupta:

(1) Four frs., from the (upper) middle of 4 (apparently) consecutive fols., with remains of 4 ll. References to *Mārah pāpīmāṃ vyākṛto*, and 2 ll. above, *māreṇa pāpīmata*; in another fr., l. 3, *sarvajña-ratnadvīpe*.

(2) Two large script frs., with Subhūti interlocutor.

(3) One fr., apparently medical, with *dadhi-ghṛtaṁ*.

(4) Three frs. of 3 fols. of 3 Pōthīs. No. 427, Hoernle Reg.

Kha. i. 0033. Six minute frs., apparently of 1 Pōthī, in Skr. and Upright Gupta; illegible. No. 428, Hoernle Reg.

LEAVES AND FRAGMENTS OF PAPER AND BIRCH-BARK PŌTHĪS EXCAVATED FROM RUINED SHRINE KHA. II

Kha. ii. i. Small triangular fr., with remains of 5 ll., from middle of fol. of Pōthī in Skr. and Upright Gupta. No. 430, Hoernle Reg.

Kha. ii. 8. Numerous small charred frs. of Pōthī; illegible, but probably in Skr. and Upright Gupta.

Kha. ii. 9. Packet of muddy rotten Pōthī frs., sticking together, and illegible, but probably in Skr. and Upright Gupta. No. 433, Hoernle Reg.

Kha. ii. 10. Minute fr. from middle of a fol. of brown paper, with remains of 4 ll., of Pōthī in Skr. and Upright Gupta. No. 434, Hoernle Reg.

Kha. ii. 13. b, 18. a. A small and a minute fr. of large script Pōthī in Skr. and Upright Gupta. No. 436, Hoernle Reg.

Kha. ii. 20, 25. Four small, and numerous minute frs. of birch-bark Pōthī in Skr. and Upright Gupta. No. 438, Hoernle Reg.

Kha. ii. 26. Pōthī. Rotten frs. of several fols. of Pōthī in Skr. and Upright Gupta; illegible. No. 439, Hoernle Reg.

Kha. ii. 28. Two frs., one small, the other minute, of Pōthī in Skr. and Upright Gupta; too sand-rubbed to be legible. No. 440, Hoernle Reg.

Kha. ii. 30. a. Five small frs. of Pōthī in Skr. and Upright Gupta, on whitish, flimsy paper. No. 442, Hoernle Reg.

Kha. ii. 30. b. Five small frs. of 1 Pōthī in Skr. and Upright Gupta, on thin, brownish paper. No. 443, Hoernle Reg.

Kha. ii. 30. c. Seven small frs. of 2 or more Pōthīs in Skr. and Upright Gupta. No. 444, Hoernle Reg.

PŌTHĪ LEAVES AND FRAGMENTS EXCAVATED FROM MINOR RUINS OF KHADALIK

Kha. iv. 1. Three narrow frs., from L. end of 3 consecutive large script fols. of Pōthī in Skr. and Upright Gupta. No. 446, Hoernle Reg.

Kha. vi. 1. a. Two small frs., one inscr. only on one side, of Pōthī in Skr. and Upright Gupta; apparently a *dhāraṇī*. No. 447, Hoernle Reg.

Kha. vi. 1. b. Six small and numerous minute frs. of 3 Pōthīs in Skr. and Upright Gupta. No. 448, Hoernle Reg.

Kha. vi. 2. Four frs. of 3 Pōthīs in Skr. and Upright Gupta, incl. 2 frs., one of fol. 28, with string-hole, measuring $6\frac{1}{4}''\times 5\frac{7}{8}''$; the other, from middle of fol., possibly belonging to R. half of fol. 28; with 5 ll. Full width is $5\frac{7}{8}''$, and total length may have been about 14″. Writing sand-rubbed, and barely legible. Fol. 28 treats of *cīvara*. No. 450, Hoernle Reg.

Kha. vi. 3. 13 small, or minute, frs. of 7 Pōthīs in Skr. and Upright Gupta, incl. 3 frs., from middle of fol., with 5 ll. on full width of $2\frac{3}{4}''$, containing apparently regulations for Bhikṣus; on l. 2, section-number 3. No. 451, Hoernle Reg.

Kha. vi. 1, 4. Half fol., and a minute fr., possibly of its other half, of Pōthī in Skr. and Upright Gupta. The half fol. measures $7''\times 2\frac{7}{8}''$, with fol. No. 4, string-hole, and 5 ll. of fancifully ornate writing, in verses from which can be seen that about 6″ are missing, full length having been about 1′ 2″. The text, not identified, begins with a Śārdūlavikrīḍita verse 14 on obv. ll. 1, 2, followed by Vasantatilaka verses 15–20; though 15 is inadvertently missed out on obv. l. 4. Read by Dr. Barnett. No. 452, Hoernle Reg.

Kha. vi, 12 and 13. Twelve very small frs., with remains of only 2 or 3 ll., of apparently 3 Pōthīs in Skr. and Upright Gupta. No. 454, Hoernle Reg.

Kha. vi. 15. One large fr. of Pōthī, apparently one half, $6\frac{1}{2}''\times 3\frac{1}{2}''$ (full width), from L. end of fol., with 7 ll. of writing in barbarous Skr. and very coarse Upright Gupta; hard, stiff paper. Apparently some *dhāraṇī*. No. 455, Hoernle Reg.

Kha. vi. 19. Fr. of another Pōthī with purport similar

to Kha. vi. 15, and in similar writing, but on soft paper. No. 456, Hoernle Reg.

Kha. vi. 002; viii. 2. Four packets of rotten, mud-embedded frs. of Pōthīs in Skr. and Upright Gupta. Writing in places still legible. Three packets transferred from Kha. viii. 2. No. 457, Hoernle Reg.

Kha. viii. 2. a. Fragmentary fols. of this as well as of two following numbers (9 in all) belong to same Pōthī in Skr. and Upright Gupta; they are written by same hand, and on paper of same size and quality. Text appears to be from *Āryaratnaketu Mahāyāna-sūtra* (see No. 461). The extant frs. measure from 8¾" to 9¾" in length, and from 4¼" to 6½" in width, and contain from 9 to 13 ll. The string-hole and fol. No. are lost. The full width probably was 7", with 13 ll.; accordingly the extant length is probably about ½ of the whole, and the full length was probably about 2′ 1". Paper very thin, soft, and fragile. Identification made by Prof. de la Vallée Poussin.

The four frs. contain text of *Ratnaketu-dhāraṇī*, the end of which occurs on bottom l. of rev. of 4th fol.: *imāṁ Ratnaketu-dhāraṇī bhāṣati sma* || No. 460, Hoernle Reg.

Kha. viii. 2. b. See initial Note on No. 460. The three frs. of No. 461 measure about 9¾" × 4¾" from the R. end of the fols. and contain 10 or 11 ll. They contain portions of 2nd Sarga which deals with *pūrva-yoga* or 'ancient history'. Name occurs in bottom l. of rev. of 3rd fol.: *idaṁ Ratnaketo* (for °*tau*) *mahāyāne sūtre dvitīya-pūrvayoga-sarga* (°*gaḥ*) *samāptaḥ* || The Skr. in places is barbarous; the interlocutor is Subhūti. No. 461, Hoernle Reg.

Kha. viii. 2. c. The two frs. of No. 462 measure 9½" × 6½" from middle of fol., omitting string-holes and the R. ends, and are inscr. with 13 ll. The interlocutor is Subhūti, and the subject is *śūnyatā*. No. 462, Hoernle Reg.

Kha. viii. 2. d. Eight large and five small frs. of 6 fols., of probably the same Pōthī in Skr. and Upright Gupta, to which Nos. 460–2 belong. The large pieces measure 5"–9½" in length and 3¾"–5" in width, with 8–10 ll. Paper and handwriting the same; interlocutor also Subhūti. The Skr. is anomalous; e.g. *parigṛṣṇati* apparently for *parigṛhṇāti*. No. 463, Hoernle Reg.

Kha. viii. 3. a. Fourteen minute frs. of a Pōthī in Skr. and very large Upright Gupta script (average height of Akṣaras ¾"). No. 464, Hoernle Reg.

Kha. viii. 4. Two minute frs. of 2 Pōthīs in Skr. and Upright Gupta. One bears very large script, and may belong to same Pōthī as preceding.

Minute fr. of fol. No. 37 of another Pōthī, with remains of 2 ll. of Cursive Gupta writing on rev. No. 465, Hoernle Reg.

Kha. viii. 6. R. half, about 5½" × 2⅛", of a Pōthī fol., with 4 ll. of Skr. and good Upright Gupta; apparently from a *dhāraṇī*. No. 467, Hoernle Reg.

Kha. viii. 7. Small fr. of a large script Pōthī in Skr. and Upright Gupta; with remains of 2 ll., and traces of a third, on coarse, dirty-coloured paper. No. 468, Hoernle Reg. 4¾" × 2¼".

Kha. viii. 8. Fr. of a large script Pōthī in Skr. and Upright Gupta; bears the No. 248, and remains of 7 ll. Text might be from one of *Prajñā-pāramitā* redactions. No. 469, Hoernle Reg.

Kha. ix. 1, 3. Three frs. of 1 large script Pōthī in Skr. and Upright Gupta. Two larger frs., about 5" × 3½", with 4 and 3 ll. respectively, are from middle of 2 consecutive fols.

Text from *Saddharma-puṇḍarīka*; that of the two larger frs. corresponds to Kern ed., ch. xviii, p. 360; that of the 3rd fr. to ch. xxiii, p. 430. It belongs to an early redaction of that work; similar to Nos. 345, 405. No. 470, Hoernle Reg.

Kha. ix. 2. Seven frs. (two small, five minute) of a Pōthī in Skr. and Upright Gupta. No. 471, Hoernle Reg.

Kha. ix. 4. Four minute frs. of 2 large script fols. in Skr. and Upright Gupta. No. 472, Hoernle Reg.

Kha. ix. 5. Five minute frs. from large script Pōthī in Skr. and Upright Gupta. No. 473, Hoernle Reg.

Kha. ix. 6. Twelve small frs. of large script Pōthī in Skr. and Upright Gupta. No. 474, Hoernle Reg.

Kha. ix. 12. Small fr. of fol., bearing remains of 4 ll. in Skr. and Upright Gupta; barely legible. No. 476, Hoernle Reg.

Kha. ix. 13. b. Fr., with remains of 6 ll., from middle of fol., mutilated all round, written in Skr. and Upright Gupta. Text from a *Prajñā-pāramitā*. No. 478, Hoernle Reg. 6½" × 3½".

Kha. ix. 15. Nearly complete fol., mutilated on the L., but containing string-hole, with 5 ll. in Skr. and Upright Gupta. Full length of fol. was 1′ 4½".

Text is from *Saddharma-puṇḍarīka*, ch. xxiii, as identified by Prof. de la Vallée Poussin; but it differs considerably from the text printed in the Kern ed., p. 427, ll. 4–15. No. 479, Hoernle Reg. 1′ 1" × 3¾". Pl. CXLIV.

Kha. ix. 16. a, b. Two large and five small frs. of large script Pōthī of *Saddharma-puṇḍarīka*, in Skr. and Upright Gupta, the full measurement of which is 1′ 9½" × 8½", with 8 ll. See No. 485.

(1) Two mutilated consecutive fols., with their Nos. lost, but bearing portion of text in Kern's ed., p. 320, l. 12 to p. 322, l. 7, in ch. xv. (2) Small fr., about 6" × 3½", from lower middle of fol., without No., showing portions of 3 ll. of text, corresponding to Kern ed., p. 319, l. 3 to l. 7, in ch. xv. (3) Small, narrow slip, 2" × 4½", from L. side of fol. 307, with only 2 Akṣaras; not identified. (4) Three minute frs., with remnants of 2 ll. of text, not identified. No. 480, Hoernle Reg.

Kha. ix. 17. Thirteen frs. (one small and twelve minute) of the same Pōthī of *Saddharma-puṇḍarīka*, as in preceding. No. 481, Hoernle Reg.

Kha. ix. 18. Two large pieces of fol. 332, measuring, in combination, 1′3" × 8½", much damaged, but preserving portion of L. margin with fol. No. 332 and of string-hole circle; but R. end broken off about 6½". The fol. belongs to large script Pōthī of *Saddharma-puṇḍarīka*, described in Nos. 480, 481. Its text corresponds to Kern ed., ch. xvii, p. 347, ll. 1 ff. No. 482, Hoernle Reg.

Kha. ix. 20. Two small and one minute frs. of large script Pōthī in Skr. and Upright Gupta; not identifiable, but possibly the same as in No. 485. No. 484, Hoernle Reg.

Kha. ix. 21. Two frs. of large script Pōthī in Skr. and Upright Gupta: viz. a damaged fr. of fol. 401, measuring about

7½″ × 5″, showing string-hole and remains of 5 ll. The total number of ll. would have been 7, and the total width about 7″. Frs. cannot have belonged to Pōthī of No. 480; but they may belong to another Pōthī of the *Saddharma-puṇḍarīka*, perhaps No. 506. Another fr. shows only fol. No. 471 and traces of a few letters. No. 485, Hoernle Reg.

Kha. ix. 22. Seventeen frs., including 15 minute ones, of Pōthī in Skr. and Upright Gupta; on soft, thin, whitish paper. A larger fr., 8″ × 3¾″, shows remains of 4 ll. as well as upper portion of string-hole circle, interrupting 4th l.; accordingly the full width of the fol. should be about 7½″ with 7 ll. Fol. No. 145 stands on the top L. corner, scribbled in fine cursive. Text in verses (ślokas), but not identified. No. 486, Hoernle Reg.

Kha. ix. 23. Mutilated fol., 1′ 7½″ × 8½″, showing circle of string-hole, but no L. margin with fol. No. It has 8 ll., and belongs to same large script Pōthī of *Saddharma-puṇḍarīka*, as described in Nos. 480–2. Its text corresponds to Kern ed., ch. i, p. 21, l. 19 to p. 22, l. 9. No. 487, Hoernle Reg.

Kha. ix. 24. Two frs. in Skr. and Upright Gupta, both from same *Saddharma-puṇḍarīka*, as in Nos. 480–2, 487. (1) a fr., about 6″ × 8½″, from middle of fol., with text corresponding to Kern ed., ch. xvi, pp. 330, 331. (2) a small fr., 3″ × 4¼″, from lower part of middle of a fol., with remains of 4 ll., corresponding to Kern ed., ch. viii, p. 203. No. 488, Hoernle Reg.

Kha. ix. 26. Two frs. of a large script Pōthī in Skr. and Upright Gupta. Probably belonging to Pōthī in No. 480, or to that in No. 485. No. 490, Hoernle Reg.

Kha. ix. 27. Thirteen frs. (including 6 minute) of large script Pōthī in Skr. and Upright Gupta, much sand-rubbed, and 'originally found folded'. Verse Nos. found on three frs. seem to show that all thirteen frs. probably belong to one fol. Verses cannot be traced in *Saddharma-puṇḍarīka*. No. 491, Hoernle Reg.

Kha. ix. 28. Three frs. in Skr. and Upright Gupta, probably from *Saddharma-puṇḍarīka*; one being from same Pōthī as in Nos. 480 ff.; the other from same Pōthī as in No. 485. No. 492, Hoernle Reg.

Kha. ix. 29. Ten very small frs. of Pōthī in Skr. and Upright Gupta. Cf. No. 486. No. 493, Hoernle Reg.

Kha. ix. 30. b. Five small and eight minute frs. of large script Pōthī in Skr. and Upright Gupta. They probably belong to Pōthī in No. 480, or to that in No. 485. See No. 492. No. 495, Hoernle Reg.

Kha. ix. 31. Numerous minute frs. of large script Pōthī apparently, in Skr. and Upright Gupta. No. 496, Hoernle Reg.

Kha. ix. 32. Seven frs. of large script Pōthī in Skr. and Upright Gupta; probably portions of *Saddharma-puṇḍarīka* in No. 480, but not identified. No. 497, Hoernle Reg.

Kha. ix. 33. Numerous minute frs. of several fols., caked together and inseparable, belonging to large script Pōthī in Skr. and Upright Gupta. No. 498, Hoernle Reg.

Kha. ix. 34. Twelve minute frs. of a large script Pōthī in Skr. and Upright Gupta, probably the same as in No. 480, or in No. 485. No. 499, Hoernle Reg.

Kha. ix. 35. Numerous minute frs. of large script Pōthī in Skr. and Upright Gupta; probably of Pōthī in No. 480, or in No. 485. No. 500, Hoernle Reg.

Kha. ix. 36. Five frs. of Pōthī of the *Saddharma-puṇḍarīka* in Skr. and Upright Gupta. Two of them are the L. and R. ends of fol. 33 of Pōthī described in No. 480. A third is portion of L. end of fol. 65; and the fourth and fifth are minute frs. from same Pōthī. Text of fol. 33 corresponds to Kern ed., ch. i, pp. 24, 25; but numbering of verses differs. No. 501, Hoernle Reg.

Kha. ix. 37. Many minute frs., embedded in mud; in Skr. and Upright Gupta. No. 502, Hoernle Reg.

Kha. ix. 38, 42. A number of large frs. in Skr. and Upright Gupta from large script Pōthī of *Saddharma-puṇḍarīka*, apparently all from chaps. xvii–xxiii. They are of thin, dun-coloured paper, rather rotten, and sticking together. Among them are some large pieces of fols., corresponding to Kern ed.: (1) ch. xvii, p. 345, l. 19 to p. 349, l. 7; (2) ch. xviii, p. 367, ll. 1 to 10; (3) ch. xix, p. 377, l. 6 to p. 378, l. 5; (4) ch. xix, p. 378, l. 6 to p. 379, l. 4; (5) ch. xix, p. 379; (6) ch. xix, p. 379, ll. 5–13; (7) ch. xix, p. 380, ll. 1–10; (8) ch. xix, p. 380, l. 11 to p. 381, l. 10; (9) ch. xxi, p. 397, l. 9 to p. 399, l. 4; (10) ch. xxiii, p. 435, l. 9 to p. 436, l. 6; (11–19) nine frs., not yet identified. Also numerous minute frs. The largest piece measures 1′ 8″ × 7″, and is a nearly complete fol. The full size probably was 1′ 10″ × 7″.

All these frs. probably belong to same Pōthī as described in No. 485. See also Nos. 492, 499, 500, 504, 506, 507. No. 503, Hoernle Reg.

Kha. ix. 39. Thirteen minute frs. of large script Pōthī in Skr. and Upright Gupta, perhaps belonging to Pōthī in No. 480, or to that in No. 485. No. 504, Hoernle Reg.

Kha. ix. 41. Four minute frs. of large script Pōthī in Skr. and Upright Gupta, probably belonging to the Pōthī in No. 480, or to that in No. 485. No. 506, Hoernle Reg.

Kha. ix. 47. Numerous minute frs. of a Pōthī, probably in Skr. and Upright Gupta; on stiff, brittle paper; illegible. No. 507, Hoernle Reg.

Kha. ix. 48. Numerous minute frs., some sticking together, of a Pōthī in Skr. and Upright Gupta, apparently belonging to Pōthī in No. 507. No. 508, Hoernle Reg.

Kha. ix. 57. a. Twenty-four frs. of several Pōthīs in Skr. and Upright Gupta. Twenty frs. belong to a *Prajñā-pāramitā*, incl. of two nearly complete, but damaged. Found folded up in a bundle; cf. above, p. 161. No. 509, Hoernle Reg.

Kha. ix. 57. b. A practically complete fol., in places damaged, and illegible; 9 ll. of writing in Skr. and Upright Gupta. Fol. marked No. 2–– and containing apparently a portion of the *Bodhisattva-piṭaka*; see obv. l. 4. Found in bundle of folded up papers of Kha. ix. 57. a. No. 510, Hoernle Reg. 9⅛″ × 2⅞″.

Kha. ix. 57. c. Seven small frs., damaged, nearly illegible, in Skr. and Upright Gupta. No. 511, Hoernle Reg.

Dar. 001. [From Darabzan-dong; see above, p. 199.] Mass of decayed frs. of Pōthī, apparently in Skr. and Upright Gupta. Large script, legible in parts. No. 543, Hoernle Reg.

B.—KHOTANESE TEXTS AND DOCUMENTS

MANUSCRIPT REMAINS BROUGHT BY MULLAH KHWĀJA AND OTHERS

Kha. 0012. a. Pōthī fol., complete, with fol. No. 135, slightly damaged at upper R. corner. Text written in Khotanese and Upright Gupta, distributed on either side in three columns, each column in 6 ll., and with 9 or 10 Akṣaras in each line. It is interspersed with Skr. words. Sand-rubbed and difficult to read. $15\frac{1}{2}'' \times 4''$.

Also small fr. from R. end, with remains of 5 ll. on full width of $3\frac{5}{8}''$, showing No. 10 on fifth l. $4\frac{1}{4}'' \times 3\frac{5}{8}''$. No. 516, Hoernle Reg.

Kha. 0013. d. Fifteen frs. of 10 Pōthīs in Khotanese and Upright Gupta, incl.:

(1) Half fol., with fol. No. 18, string-hole, and 5 ll. writing; $8\frac{1}{4}'' \times 2\frac{7}{8}''$. (2) Quarter fol., with string-hole, and 5 ll. writing; but fol. No. rubbed out and illegible; $5'' \times 3\frac{1}{2}''$. (3) Quarter fol., with fol. No. 9, and 5 ll. writing; on obv. l. 5 reads *salye drai-māśtä*, 'annually, three-monthly'; $3'' \times 2\frac{5}{8}''$. (4) Fr. from middle of fol., with 4 ll. writing; $6'' \times 2\frac{1}{2}''$. (5) Damaged half fol., with string-hole, and 5 ll. writing; but fol. No. broken off; showing numeral *4* on obv. l. 2, and numeral *6* on rev. l. 2; $5\frac{3}{4}'' \times 2\frac{1}{4}''$. &c. No. 522, Hoernle Reg.

Kha. 0013. e. Four frs. of documents, paper, written in Khotanese language and Cursive Gupta, incl.: (1) R. upper corner, with remains of 5 ll. on obv. and 3 ll. on rev.; ending with *gausi byaudä kūsa* 13; $6'' \times 3\frac{1}{2}''$; (2) with beginning and 2 ll. writing, ending on 2nd l. with *naladä bhāga 4* || *kuṣṭe bhāga 4* || Rev. blank; $7\frac{3}{4}'' \times 1\frac{1}{4}''$. No. 523, Hoernle Reg.

PŌTHĪ AND DOCUMENT REMAINS EXCAVATED AT RUINED SHRINE KHA. I

Kha. i. 4. Fr. of fol., R. lower corner, with remains 4 ll. writing in Khotanese and Upright Gupta. No. 164, Hoernle Reg.

Kha. i. 13. Fourteen complete and one fragmentary fol. in Khotanese and Upright Gupta. The former are numbered 134–47; the latter has lost L. side up to string-hole, and is prob. 148; it is the final fol. of Pōthī. All fols. more or less damaged along upper and R. edges; and writing in places rubbed and almost illegible. Fol. no. on L. margin of obv.

Contents: transl. into Khotanese from Skr. *Śūraṅgama-samādhi-sūtra*; based on a much more expanded version than that preserved in Hoernle MS. No. 144, and apparently agreeing with the Tib. transl. in the Kangyur; see *Manuscript Remains of Buddhist Literature*, p. 125.

The name *Śūraṅgama* occurs on fols. $144b^{i.iii}$, $145b^{iii}$, $146a^{iv}b^{i}$. The interlocutors are: *Dṛḍhamata*, fol. $134b^{i}$, $135a^{v}$; *sthavira* or *āśivi Ananda*, fol. $136b^{iii}$, $137a^{iv}$; *Śasi-vimalagarbha*, fol. $136a^{iii.v}$, $137a^{v}$. *Manyuśrī*, or *Maṃñuśrī*, fol. $144a^{iii}b^{ii}$; *Sāriputra*, fol. $140b^{i}$, $141a^{iii.v}$, $143a^{iv}b^{ii}$. No. 170, Hoernle Reg. $16\frac{1}{2}'' \times 3\frac{1}{2}''$.

Kha. i. 20. Three small frs. of 2 Pōthīs in Khotanese language and Upright Gupta.

(1) Soft, brown paper; narrow strip, $7\frac{3}{4}'' \times 2''$, showing upper edge and string-hole; with remains of 3 ll. of writing; full leaf must have been 4″ wide, with 5 ll.

(2) White, soft paper; $2\frac{3}{4}'' \times 3''$, with fol. No. 19, and $2'' \times 1\frac{1}{4}''$. No. 175, Hoernle Reg.

Kha. i. 22. Fr. of large Pōthī in Khotanese and Upright Gupta. Thin, dun-coloured paper; full width of L. side $5\frac{3}{4}''$, with fol. No. 457 on obv.; apparently final fol.; 8 ll. on page; large letters.

Remains of some Buddhist Sūtra; possibly the *Śūraṅgama-samādhi*. No. 177, Hoernle Reg. $1\frac{5}{8}'' \times 5\frac{3}{4}''$.

Kha. i. 27. a. Two frs. of Pōthī, on very thin, soft paper, in Khotanese and Upright Gupta.

(1) One fol., with remains of 5 ll. writing from some Buddhist canonical text, *c.* $6'' \times 3''$; (2) another fr. with remains of 3 ll., $1'' \times 1\frac{1}{2}''$. No. 180, Hoernle Reg.

Kha. i. 38. Fourteen minute frs., apparently the same Pōthī, in Khotanese and Upright Gupta (large size). Some Buddhist religious work. No. 186, Hoernle Reg.

Kha. i. 45. a. Two small frs. of Pōthī in Khotanese and Upright Gupta; coarse, brownish paper. Larger fr., with 3 ll., appears to be final fol., being blank on rev. No. 193, Hoernle Reg. Gr. fr. $4'' \times 2\frac{1}{4}''$ (full width).

Kha. i. 49. a. Small fr. of Pōthī fol., showing R. half of circle round string-hole; 4 ll. writing in Khotanese and Upright Gupta. Perhaps containing a *dhāraṇī*. No. 195, Hoernle Reg. $3'' \times 2''$ (full width).

Kha. i. 52. a. Fr. of Pōthī fol. (R. edge), with 4 ll. in Khotanese and Upright Gupta. Also another minute fr. in same hand, and possibly of same fol. No. 197, Hoernle Reg. $3\frac{1}{2}'' \times 2\frac{3}{4}''$.

Kha. i. 53, 66, 91. Three frs. of paper documents. *53* inscr. on obv. with remains of 8 ll. writing in Cursive Gupta and Khotanese language; rev. blank. *66* bearing on obv. remains of 3 similar ll.; rev. blank. *91* with remains of Chin. on rev. No. 199, Hoernle Reg. Gr. M. $2\frac{1}{4}'' \times 5\frac{1}{4}''$.

Kha. i. 56. Two large frs. of Pōthī fols. showing string-holes; 4 ll. writing in Khotanese and Upright Gupta; from some Buddhist religious work.

Two Bodhisattvas are named: 2nd fol., obv. l. 4, *śubhā-dhimuktä bodhisatvä tta hvate*; 1st fol., obv. l. 3, *śaṃ nhä bodhisatvä tta hvate*. No. 202, Hoernle Reg. (Each) $7\frac{3}{4}'' \times 3''$.

Kha. i. 58. a. Frs. of 2 Pōthīs, two large and four minute, in Khotanese and Upright Gupta.

(1) Fol., practically complete, but much damaged; fol. No. missing; 5 ll. writing. $7'' \times 3''$. (2) Fr. from middle of fol.; 4 ll.; handwriting simiiar to Pōthī 1. No. 204, Hoernle Reg.

Kha. i. 63. Two frs. of Pōthī fols., both in Khotanese and Upright Gupta, but of different Pōthīs and in different hands: (1) large, much damaged fr., with remains of string-hole, and 5 ll. large writing. Text unknown. $8\frac{3}{4}'' \times 2\frac{1}{2}''$. (2) minute fr., with remains of 4 ll. $1\frac{1}{2}'' \times 1\frac{3}{4}''$. No. 210, Hoernle Reg.

Kha. i. 69. a. Fr. of Pōthī fol. in Khotanese and Upright Gupta; remains of 5 ll. writing. Text unknown. No. 214, Hoernle Reg. $3'' \times 2\frac{1}{4}''$.

Kha. i. 70. Twelve minute frs. of Pōthī in Khotanese and Upright Gupta. Paper soft and somewhat rotten. No. 216, Hoernle Reg.

Kha. i. 73. b. Four frs. of Pōthī in Khotanese and Upright Gupta; small, narrow oblong, with 3 ll. writing; all from L. side, with fol. Nos. 15, 40 (or 60?), and a third illegible (10 ?). No. 218, Hoernle Reg. Width $1\frac{7}{8}''$.

Kha. i. 73. b. Fr. of inscr. wood, apparently from covering board of Pōthī, found with fr. in No. 217. Frs. of large script Pōthī still stick to it. No. 218, Hoernle Reg.

Kha. i. 74. a. Four small frs. of 4 Pōthīs, with writing in four different sizes, in Khotanese and Upright Gupta. No. 219, Hoernle Reg.

Kha. i. 79. a. Thirteen frs. of 5 Pōthīs in Khotanese and in different-sized Upright Gupta scripts. No. 226, Hoernle Reg.

Kha. i. 82. a. Thirteen frs. of 6 Pōthīs in Khotanese and Upright Gupta. Paper of each of six is of a different colour and texture. Seven frs. minute. No. 235, Hoernle Reg.

Kha. i. 86. a. Two frs. of fols. of two Pōthīs in Khotanese and Upright Gupta. (1) From bottom of fol., with remains of 3 ll. showing the verse Nos. 6 and 8. $3\frac{1}{4}'' \times 1\frac{1}{2}''$. (2) With remains of 2 ll., also from bottom of fol., paper of different colour and texture. $2'' \times 1''$. No. 238, Hoernle Reg.

Kha. i. 89. a. Initial fol. of Pōthī, practically complete, with 6 ll. writing in Skr. and Upright Gupta; the blank rev. inscr. with 5 ll. writing in Khotanese language and Cursive Gupta script. Much of writing washed out by damp and illegible; paper coarse, hard, and stiff.

Skr. text refers to Parinirvāṇa. No. 241, Hoernle Reg. $11'' \times 3\frac{1}{4}''$.

Kha. i. 91. a. Five frs. of Pōthī fols.; from L. side of leaf, with the consecutive Nos. 427, 428, 429, 430, 431; and two minute frs. from middle of leaf; with 5 ll. writing in Khotanese and Upright Gupta. The existing width being $3\frac{1}{2}''$, the full width must have been $7''$ with 8 ll. writing. Paper very coarse and thin. Also fr. from middle of fol. of another Pōthī, on coarse but thicker paper; with remains of 4 ll. No. 245, Hoernle Reg.

Kha. i. 92. a. Five frs. of 3 Pōthīs in Khotanese and Upright Gupta, incl. fr. from L. end, with No. 88, and 5 ll. writing; on dark, coarse, thick paper. $3'' \times 3\frac{3}{4}''$ (full width). No. 247, Hoernle Reg.

Kha. i. 95. a. Six frs. of 3 Pōthīs in Khotanese and Upright Gupta, different sizes, and on different paper. No. 255, Hoernle Reg.

Kha. i. 97. a. Fr. of Pōthī fol., flimsy paper, with 6 ll. large writing in Khotanese and Upright Gupta; only one or two Akṣaras in each line. No. 259, Hoernle Reg. $1\frac{1}{4}'' \times 4\frac{3}{4}''$.

Kha. i. 99. Two small frs. of fols. of 2 Pōthīs in Khotanese and Upright Gupta. No. 263, Hoernle Reg.

Kha. i. 100. a, 105. a, 180. Four small frs. of fols. of 2 Pōthīs in Khotanese and Upright Gupta. No. 264, Hoernle Reg.

Kha. i. 101. Two small frs. of Pōthī fols. in Khotanese and Upright Gupta. No. 266, Hoernle Reg.

Kha. i. 103. Five small frs. of fols. of 2 Pōthīs in Khotanese and Upright Gupta. No. 268, Hoernle Reg.

Kha. i. 103–4. Large fr. of Pōthī fol. (2 pieces joined), with remains of 7 ll. writing in Khotanese and Upright Gupta; very coarse, stiff, dirty paper. No. 269, Hoernle Reg. $6\frac{1}{4}'' \times 6\frac{1}{4}''$.

Kha. i. 107. Two small frs. from Pōthī fol. in Khotanese and Upright Gupta. Large script and widely spaced lines. One fr. from L. end with remains of 4 ll., the other from lower side, with remains of 5 ll. The two pieces stitched together, though they do not really adjoin, or give a consecutive text. No. 272, Hoernle Reg.

Kha. i. 108. a. Two frs. of fols. of large Pōthī in Khotanese and Upright Gupta; both from L. end. One with fol. No. 13, string-hole, and remains of 5 ll. writing; the other with fol. No. 77 (much faded) and remains of 4 ll. No. 273, Hoernle Reg. $8\frac{3}{4}'' \times 3\frac{1}{2}''$ and $3\frac{3}{4}'' \times 2\frac{1}{2}''$.

Kha. i. 109. a. Sixteen frs. of 2 Pōthīs in Khotanese and Upright Gupta: (1) 15 frs. on very flimsy, coarse paper, much damaged and almost illegible; (2) one fr. on thicker paper, of another Pōthī. No. 275, Hoernle Reg.

Kha. i. 110. Fr. of Pōthī fol., R. end; with 4 ll. writing in Khotanese and Upright Gupta. Large piece torn out. No. 277, Hoernle Reg. $5\frac{1}{4}'' \times 2\frac{1}{2}''$.

Kha. i. 111, 112. a. Three frs. of documents, paper, in Khotanese and Cursive Gupta: remains on obv. (1) of 3 ll., (2) of 6 ll., (3) of 1 l. Rev. blank. No. 278, Hoernle Reg. Gr. M. $5\frac{1}{2}'' \times 3''$.

Kha. i. 115. Four frs. of 3 Pōthīs in Khotanese and Upright Gupta, incl. two frs. from middle of two fols., with remains of 5 ll.; string-hole lost; hence full length about $12''$. $5\frac{3}{4}'' \times 3\frac{1}{2}''$ (full width). No. 280, Hoernle Reg.

Kha. i. 117. a. Minute fr. of Pōthī fol., R. lower corner; preserving only the Nos. 4 and 5 on obv., and 6, 7 on rev., as finals of respective lines. No. 282, Hoernle Reg.

Kha. i. 119. One complete Pōthī fol. and four frs. in Khotanese and Upright Gupta, incl.:

(1) Complete fol., No. 29, with 5 ll. writing; on obv. ll. 2–4, name a series of 8 *gyasta* (or *jasta*); $11\frac{5}{8}'' \times 2\frac{5}{8}''$. (2) Fol. nearly complete, slightly mutilated at both ends, with loss of fol. No.; coarse brown paper, with 5 ll. much rubbed and almost illegible; $12'' \times 3\frac{1}{2}''$. (3) L. side of fol. with No. 71 and string-hole, with 6 ll.; $4\frac{1}{2}'' \times 2\frac{1}{2}''$. (4) L. half of fol. 33, with string-hole and 5 ll. large writing; $8'' \times 3\frac{1}{2}''$. (5) Minute fr. of flimsy paper, with 2 ll. large, almost illegible writing. No. 285, Hoernle Reg.

Kha. i. 124. Four small frs. of 2 or 3 Pōthīs in Kho-

tanese and Upright Gupta, incl. two frs. with one side blank, and both with 5 ll. writing on the other. No. 290, Hoernle Reg.

Kha. i. 127. a. Fr. of Pōthī fol., R. end; with 6 ll. large writing in Khotanese and Upright Gupta. Also minute fr., with remains of 2 ll. Both much damaged. No. 292, Hoernle Reg. Gr. fr. 4¼".

Kha. i. 129. a. Small fr. of Pōthī fol., middle, with remains of circle round string-hole, and 6 ll. small writing in Khotanese and Upright Gupta. Also minute fr. from another Pōthī. No. 297, Hoernle Reg.

Kha. i. 131. a. Two small frs. of 2 Pōthīs in Khotanese and Upright Gupta. No. 300, Hoernle Reg.

Kha. i. 133. a–f. Six frs. of very large Pōthī fol., in large script. From upper middle of fol., very thin, whitish paper, with remains of 6–8 ll. in Khotanese and Upright Gupta. Text apparently from some Buddhist work. No. 305, Hoernle Reg.

Kha. i. 135. a. Four frs. of 4 Pōthīs, in Khotanese and Upright Gupta, measuring resp. 11" × 4", 7¼" × 3½", 7" × 3", 2" × 4". All four from Buddhist sacred books. No. 308, Hoernle Reg.

Kha. i. 137. b. Two small frs. of Pōthī fols., L. end, numbered 44 and 48, in Khotanese and Upright Gupta. No. 312, Hoernle Reg. 2½" × 3".

Kha. i. 138. b. Eighteen minute frs. of Pōthīs in Khotanese and Upright Gupta. No. 313, Hoernle Reg.

Kha. i. 158. Short roll, apparently complete, on coarse, brownish paper; damaged at top; inscr., on obv., with some Chinese text, and 2 marginal Tibetan notes; on rev., with a *dhāraṇī* in very faded and badly legible Cursive Gupta and in Khotanese language. No. 322, Hoernle Reg. 12⅜" × 10¼".

Kha. i. 160. Five small frs. of Pōthī fols. with remains of 5 ll. in Khotanese and Upright Gupta; soft, yellowish paper. No. 324, Hoernle Reg.

Kha. i. 170. Fr. of Pōthī fol., middle, without string-hole; brown, stiff paper; remains of 5 ll. writing in Khotanese and Upright Gupta from some Buddhist text. No. 327, Hoernle Reg. 8" × 3½".

Kha. i. 171. a. Fr. of Pōthī fol. in Khotanese and Upright Gupta. One side blank, showing that fr. belongs to initial or final fol. Remains of 5 ll. rather large writing, from some Buddhist text. No. 328, Hoernle Reg. Gr. fr. 2⅝" (full width).

Kha. i. 173, 174, 174. a, 175, 176. Five small frs. of 4 Pōthīs in Khotanese and Upright Gupta. No. 330, Hoernle Reg.

Kha. i. 176. a. Fr. of document, paper, with remains on obv. of crude writing in Cursive Gupta and Khotanese language; also, apparently, with some sort of signature. No. 334, Hoernle Reg. 6¼" × 2½".

Kha. i. 182. a. Eleven frs. of 5 Pōthīs in Khotanese and Upright Gupta. Gr. fr. with string-hole and remains of 4 ll. writing. 8" × 2½". No. 340, Hoernle Reg.

Kha. i. 184. Four frs. of Pōthī in Khotanese and ornate Upright Gupta; very dark semi-rotten paper. Gr. fr. from middle of fol. with string-hole; remains of 5 ll. hardly legible. No. 343, Hoernle Reg. Gr. fr. 6½" × 1¼".

Kha. i. 185. a. Four frs. of 2 Pōthīs in Khotanese and Upright Gupta; three of 1 Pōthī, and one (discoloured) of another. Gr. fr. of former, with 6 ll., is from L. of fol. and without string-hole. No. 343, Hoernle Reg. Gr. fr. 11" × 3¾".

Kha. i. 187. a. Twelve small frs. of 7 Pōthīs in Khotanese and Upright Gupta. Five frs. of dark brown paper, half burnt. No. 346, Hoernle Reg.

Kha. i. 193. Two fragmentary fols. of 2 Pōthīs in Khotanese and Upright Gupta. (1) L. end of a fol. up to string-hole, with 4 ll., 4" × 2½"; (2) from middle of fol., with remains of 5 ll., *c.* 3" sq. No. 352, Hoernle Reg.

Kha. i. 198. Twelve frs. of Pōthī in Khotanese and Upright Gupta; brownish, soft, semi-rotten paper. Gr. fr. a nearly complete fol., from L. end, with string-hole but illegible No.; 5 ll. writing rather faded; contains apparently a metrical text. Other frs. small. See also i. 160, 171, 173. No. 355, Hoernle Reg. Gr. fr. 12½" × 3½".

Kha. i. 199. d. and 200. Three small frs. of 3 Pōthīs in Khotanese and Upright Gupta, 4½" × 4"; 3⅞" × 3"; 2" × 1½", resp. No. 359, Hoernle Reg.

Kha. i. 203. a. Fr. of Pōthī fol., middle of top, with remains of 4 ll. in Khotanese and Upright Gupta. No. 365, Hoernle Reg.

Kha. i. 205. a. Six frs. of 3 Pōthīs in Khotanese and Upright Gupta, incl. large fr. (about half) of fol. 35, with string-hole, and 6 ll. writing. No. 369, Hoernle Reg.

Kha. i. 206. a. Five frs. of 3 Pōthīs in Khotanese and Upright Gupta, incl. two frs. from middle of 2 fols., with 6 ll. of large script. Gr. fr. 7" × 4". No 371, Hoernle Reg.

Kha. i. 208. One small fr. each of 4 Pōthīs in Khotanese and Upright Gupta. No. 374, Hoernle Reg.

Kha. i. 211. a. Five frs. of Pōthīs in Khotanese and Upright Gupta, incl. half fol. with string-hole, No. 113, and 4 ll. writing, and small fr. with remains of 5 ll., Skr. on obv., and Khotanese on rev. No. 377, Hoernle Reg.

Kha. i. 214. a. Six frs. of 2 Pōthīs in Khotanese and Upright Gupta, incl. fr. from middle of fol., with remains of 5 ll. writing, being apparently translation of *Suvarṇabhāsottama-sūtra.* See No. 425. No. 381, Hoernle Reg.

Kha. i. 215. Small fr. of Pōthī fol. in Khotanese and Upright Gupta, double circle, marking end of 24th chap. No. 385, Hoernle Reg.

Kha. i. 217. Two small frs. of 2 Pōthī fols. in Khotanese and Upright Gupta. No. 386, Hoernle Reg.

Kha. i. 218, 219. a. Six frs. of various Pōthīs in Khotanese and Upright Gupta, incl. half fol. with fol. No. 2[7]7. 9¼" × 3⅝". No. 387, Hoernle Reg.

Kha. i. 221. Roll, practically complete, on stiff, deep-brown paper. Inscr., on obv., with Chinese; on rev., with 38 ll. of unidentified Buddhist text, in Cursive Gupta and Khotanese language. No. 389, Hoernle Reg.

Kha. i. 223. a. Eleven small frs. of 8 Pōthīs in Khotanese and Upright Gupta. No. 392, Hoernle Reg.

Kha. i. 300. a. Six frs. of 5 Pōthīs in Khotanese and Upright Gupta, incl. two frs. of syllabary. No. 395, Hoernle Reg.

Kha. i. 301. a. Two frs. of 2 Pōthīs in Khotanese and

Upright Gupta, incl. one fr. from L. of fol. 44, with 4 ll. writing. 6" × 2¼". No. 397, Hoernle Reg.

Kha. i. 302. a. Two frs. of Pōthī fol. with 4 ll. in Khotanese and Upright Gupta. No. 399, Hoernle Reg. Gr. fr. 5" × 2".

Kha. i. 303. a. Four small frs. of 2 Pōthīs in Khotanese and Upright Gupta. No. 401, Hoernle Reg.

Kha. i. 305. a. Small fr. of roll inscr. on one side with Khotanese text in Upright Gupta; on other with Chinese. Possibly another fr. of roll described in *J.R.A.S.*, 1906, p. 696. No. 404, Hoernle Reg.

Kha. i. 306. a. Pōthī fol., complete with fol. No. 5, and 5 ll. writing in Khotanese language and Upright Gupta script. On obv. l. 4 occurs *upāya-kauśalyā*, and rev. l. 2, *hvāṣṭi pātcä dharma-saṃgītä-sūträ vīrä*, 'well established again in the Dharma-saṃgīti-sūtra'. These are names of two Buddhist Sūtras, see *Mahāvyutpatti*, Nos. 65, 20, and 21; also *Śikṣāsamuccaya* (ed. Bendall), Index. On obv. l. 5, *baudhisatva-carya-haṣkāmi ttina*, 'by this whole sum of Bodhisattvahood'.

This perhaps indicates work to be transl. of *Bodhicaryāvatāra* of Śāntideva. It must be some compendium of doctrine, like the *Śikṣāsamuccaya*; but in this the text of our fol. does not seem to occur. Below last l., on bottom margin, 10 letters in Cursive Gupta, apparently supplying a textual omission, marked by a cross. No. 406, Hoernle Reg. 1' 3" × 2½".

Kha. i. 306. b. Fr. of Pōthī fol., ¾ complete from R. side; with 6 ll. writing in Khotanese and Upright Gupta; interspersed with Skr. phrases.

Orig. Skr. work, of which this is a transl., not identifiable; Śāriputra is interlocutor, as in *Saddharma-puṇḍarīka*. No. 407, Hoernle Reg. 1' 2" × 3¾".

Kha. i. 309. a. Pōthī fol. nearly complete, slightly defective on R. side; with fol. No. 43, and 4 ll. writing in Khotanese and Upright Gupta. The text contains a long series of queries; orig. Skr. not identified. No. 412, Hoernle Reg. 15½" × 3".

Kha. i. 309. b. 1. Fourteen frs. of 13 Pōthīs in Khotanese and Upright Gupta. No. 414, Hoernle Reg.

Kha. i. 310. Two frs. of documents written in Cursive Gupta script and Khotanese language. (1) Soft, dark, coarse paper; obv. 14 ll., rev. 10 ll.; 9½" × 3". (2) Stiff, coarse paper; obv. remains of 5 ll.; rev. blank; 4½" × 2⅜". No. 417, Hoernle Reg.

Kha. i. 318, 319. a. Three Pōthī fols., nearly complete, with Nos. 211, 214, and 226, and also minute fr. of a 4th fol.; with 5 ll. writing in Khotanese and Upright Gupta. Strip of about 2" lost on R. Surviving portions much damaged and sand-rubbed. Obv. of fol. 214 contains series of salutations, with mention of *Suvarṇabhāsottama-sūtra*, to a transl. of which the fols. prob. belonged.

Fol. 226 has a series of verses, numbered 2, 3, 4 on obv., and 5, 6, 7, [8, 9], 20 on rev. No. 425, Hoernle Reg. 13¾" × 3½".

Kha. i. 319. b. Two small frs. of 2 Pōthīs in Khotanese and Upright Gupta. No. 426, Hoernle Reg.

Kha. i. 0034. Minute fr. of Pōthī fol., thin paper; traces of 3 ll. writing in Khotanese and Upright Gupta. No. 429, Hoernle Reg.

REMAINS OF PŌTHĪS AND DOCUMENTS FROM SHRINE KHA. II AND MINOR RUINS, KHĀDALIK

Kha. ii. 1, 2. Three small frs. of Pōthī in Khotanese and Upright Gupta. No. 431, Hoernle Reg. Gr. fr. 3" × 3".

Kha. ii. 3. Wooden tablet damaged at R. end; inscr. in Khotanese and Cursive Gupta, on both sides. On obv., 4 ll. running parallel to long side.

On rev. are three statements. First, on L., of 5 short ll. parallel to long side. Second and third statements, on R., of 6 short ll. each, run parallel with short side. No. 432, Hoernle Reg. 10" × 1⅞".

Kha. ii. 12, 13. a. Two lots of Pōthī frs., muddy and rotten, in Khotanese and Upright Gupta; nearly illegible. No. 435, Hoernle Reg.

Kha. ii. 18. b. Two frs. of Pōthī fols., consecutive, Nos. 15 and 16, with 5 ll. in Khotanese and Upright Gupta. Paper soft, thick, dark brown, much resembling fr. in No. 426. No. 437, Hoernle Reg. 4" × 3¼".

Kha. ii. 29. Three fols. of Pōthī in Khotanese and Upright Gupta. Two, nearly complete, numbered 8 and 9; 3rd, about ¾ complete, is prob. No. 10, as it seems to continue final salutations. Inscr. with 5 ll. writing much intermixed with Skr. words or phrases. Very thin, soft paper, sand-rubbed. Writing in many places barely legible. No. 441, Hoernle Reg. 12¾" × 2⅝".

Kha. ii. 31. Three frs. of Pōthī fols., two small, one minute; with 4 ll., on full width of about 4½", in Khotanese and Upright Gupta; much damaged and barely legible; possibly belonging to same fol. No. 445, Hoernle Reg.

Kha. vi. 1. c. Seven small frs. of Pōthīs in Skr., with Khotanese intermixed, and in Upright Gupta. They are from L., and of 7 fols., three of which show portions of circle of string-hole with fol. Nos. 8, 9, 10; 4 ll. writing. No. 449, Hoernle Reg.

Kha. vi. 12. b, 13. Pōthī frs., three large and many minute, of a number of Pōthīs in Khotanese and Upright Gupta, incl. fr. from R. of fol., with 6 ll., apparently in verse, 6" × 3¼"; (2) fr. badly damaged, from R. end of fol., with 5 ll. in verses numbered 5-7, 5¼" × 3"; (3) fr. with 5 ll. in verse, 3" × 2¾". No. 453, Hoernle Reg.

Kha. vi. 14. b. Nine frs. of document on coarse, thin, brownish paper, inscr. on both sides with writing in Khotanese and Cursive Gupta. (1) Lower portion of doc. inscr. on obv. with statement of apparently medical import. On rev., series of statements in about 10 paragraphs, barely legible. 12" × 8½". (2) Eight small pieces, almost illegible, apparently belonging to upper portion of doc. No. 455, Hoernle Reg.

Kha. vii. 1. Half of Pōthī fol., numbered 43, with 6 barely

legible ll. in Khotanese and Upright Gupta. Hard, stiff paper. No. 458, Hoernle Reg. 8" × 3".

Kha. viii. 1. Pōthī fol., nearly complete, mutilated at R. end, with 5 ll. writing in Khotanese and Upright Gupta. In places illegible. Soft, thin, whitish paper. No folio No. visible. Text seems to treat of various kinds of *śīla*. No. 459, Hoernle Reg. $9\frac{1}{2}$" × $2\frac{1}{2}$".

Kha. viii. 5. Small fr. of Pōthī fol., inscr. with 3 ll. writing in Khotanese and Upright Gupta. Thin, whitish paper. No. 466, Hoernle Reg.

Kha. ix. 8. Wooden splinter, fr. from middle of tablet, with faint inscr. in Khotanese and Cursive Gupta, on one side only; illegible. No. 475, Hoernle Reg. 3" × $1\frac{1}{4}$".

Kha. ix. 13. a. Six frs. of 2 Pōthīs in Khotanese and Upright Gupta, incl. two large frs. possibly of same fol., with 6 ll. writing. Also two minute frs. found in bundle with No. 512. Gr. fr. 7" × 4". No. 477, Hoernle Reg.

Kha. ix. 19. Fr. of inscr. wooden stick, sq. in section, both ends broken; inscr. on all four sides, in Khotanese and Cursive Gupta; only partially legible. No. 483, Hoernle Reg.

Kha. ix. 25. Fr. of document on whitish, soft paper, with remains on obv. of 1 l. in Khotanese and Cursive Gupta. No. 489, Hoernle Reg.

Kha. ix. 30. a. Six frs. of two Pōthīs in Khotanese and Upright Gupta. Found in bundle with No. 512. No. 494, Hoernle Reg.

Kha. ix. 40. Wooden splinter, from L. end of tablet; inscr. on both sides with remains of statement in Khotanese and Cursive Gupta. No. 505, Hoernle Reg. $4\frac{3}{4}$" × $\frac{3}{4}$".

Kha. ix. 57. d. Fr. of document, paper, inscr. on obv. in Tib. with signature and two red impressions of round seal. Rev. blank. Found in bundle with No. 509. No. 512, Hoernle Reg. 7" × $3\frac{1}{4}$".

Kha. ix. 67. Wooden splinter from L. end of tablet, inscr. with 2 ll. Khotanese and Upright Gupta; illegible. No. 513, Hoernle Reg. 2" × $\frac{3}{4}$".

Kha. ix. 75. Fr. of Pōthī fol., R. half, with remains of 4 ll. in Khotanese and Upright Gupta; verse Nos. 1, 4, 5, being visible. No. 511, Hoernle Reg. $6\frac{3}{4}$" × $2\frac{3}{8}$".

II.—DOCUMENTS ON WOOD AND PAPER, IN KHOTANESE, FROM MAZĀR-TOGHRAK SITE

(See above, pp. 205 sq. The documents M. T. i. 1–0028 were first shown with the erroneous 'site-mark' M. tagh.)

M. T. 30. Three stick-like wooden tablets, inscr. in Khotanese and Upright Gupta.

(1) Stick split, perforated at one end, and with 3 holes (not perforations); inscr. on the holed side with 1 l.; $11\frac{3}{4}$" × 1".

(2) Stick with loose bark on one side, and on other side short illegible legend, 7" × $\frac{1}{2}$".

(3) Stick, perforated at one end; inscr. on one side with a faded legend, apparently in Gupta chars. No. 542, Hoernle Reg. $4\frac{1}{2}$" × $\frac{3}{4}$".

M. T. i. 1. Fr. of wooden tablet; inscr. with 3 Akṣaras in Cursive Gupta and probably Khotanese language. No. 76, Hoernle Reg. 1" × $\frac{5}{8}$".

M. T. i. 2. Fr. of wooden tablet, very small, uninscr. No. 77, Hoernle Reg. $1\frac{3}{4}$" × $\frac{1}{2}$".

M. T. i. 3. Fr. of wooden tablet, oblong, pointed at R. end; inscr. on one side with 3 ll., on other side 2 ll., in Khotanese and Cursive Gupta. No. 78, Hoernle Reg. 3" × 1".

M. T. i. 5. Fr. of wooden tablet; pointed at R. end; inscr. on one side with 2 ll., on other with 1 l. in Khotanese and Cursive Gupta. No. 79, Hoernle Reg. 6" × 1".

M. T. i. 7. Fr. of document on thin, buff paper, inscr. on obv. with remains of date: *15 myi ksaṃṇi a* . . . i.e., 'in the 15th period', in Cursive Gupta. Rev. blank. Also five minute frs. with traces of Chin. writing and signature scrawl. No. 80, Hoernle Reg. $4\frac{1}{4}$" × $1\frac{1}{2}$".

M. T. i. 8. Two frs. of document on thin, buff paper, inscr. on obv. with 7 and 3 ll. resp. in Khotanese and Cursive Gupta. Rev. blank. No. 81, Hoernle Reg. $3\frac{1}{2}$" × $8\frac{1}{2}$" and $2\frac{1}{2}$" × $1\frac{3}{4}$".

M. T. i. 10. Fr. of paper document; inscr. on obv. with 2 initial ll. of record in Khotanese and Cursive Gupta. Rev. blank. No. 82, Hoernle Reg. $4\frac{1}{2}$" × $2\frac{1}{2}$".

M. T. i. 13. Fr. of document on coarse paper, inscr. on obv. with 1 l., containing remains of date, in Khotanese and Cursive Gupta. Rev. blank. No. 83, Hoernle Reg. 10" × 2".

M. T. i. 15. Fr. of document on thin, whitish paper; inscr. on obv. with 16 ll. in Khotanese and Cursive Gupta. Rev. blank. No. 84, Hoernle Reg. 15" × $2\frac{1}{2}$".

M. T. i. 16. Six frs. of document on extremely thin buff paper, on obv. with 2–4 ll. Khotanese and Cursive Gupta. Rev. blank. No. 85, Hoernle Reg.

M. T. i. 17. Fr. from middle of document on thin, buff paper, with portions of two signed statements, of 4 ll. each, in Khotanese and Cursive Gupta. Rev. blank. Also five small frs. of another document on thin, whitish paper, with traces of writing in Cursive Gupta. No. 86, Hoernle Reg. $6\frac{1}{2}$" × 8".

M. T. i. 17. a. Fr. of document on thin, whitish paper; on obv. one l. in Khotanese and Cursive Gupta. Rev. blank. No. 86, Hoernle Reg. 5" × 2".

M. T. i. 20. Five frs. of document on thin, whitish paper; from blank bottom margin of sheet with traces of illeg. signatory scrawl of large size, and Chinese counter-signature of small size. No. 87, Hoernle Reg.

M. T. i. 0028. Small document, apparently complete, on oblong strip of coarse, brownish paper, inscr. with $2\frac{1}{2}$ ll. in Khotanese and Cursive Gupta, also signatory scrawl. Rev. blank. No. 88, Hoernle Reg. 10" × 3".

III.—MANUSCRIPT REMAINS IN SANSKRIT, KUCHEAN, KHOTANESE FROM SITES OF MĪRĀN, YĀR-KHOTO, SHŌRCHUK, KHŌRA

(See above, pp. 489, 1167, 1187 sqq., 1224)

Mi. ii. 0011. Remains of palm-leaf Pōthī, one mutilated fol. and fr. of another, in Skr. and Upright Gupta. Writing of rather early Indian Gupta type; 5 ll. each side on large fr., 2 ll. on small. Large fr. mutilated on L. and top, with string-hole $4\frac{1}{2}''$ from R. end. Text apparently grammatical; see e.g. l. 4. No. 530, Hoernle Reg. Gr. fr. $6\frac{1}{2}'' \times 2''$. Pl. CXLIII.

Y.K. 009. Nine frs. of Pōthī in Kuchean language and Slanting Gupta chars.; not yet read, or identified. Four frs. large, five minute. No. 538, Hoernle Reg.

Mi. ii. a. Fourteen frs. of Pōthī in Skr. and Upright Gupta. Four larger frs. belong to same fol., which, as complete, must have measured about $20\frac{3}{4}'' \times 3\frac{3}{8}''$; it retains damaged fol. No. 51 and shows 7 ll. on full width of $3\frac{3}{8}''$. Three smaller frs. belong to another fol., possibly No. 52. The other seven fragments may belong to a third fol.

All frs. described, and transcribed by Prof. de la Vallée Poussin in *J.R.A.S.*, 1913, pp. 850 ff. They belong to the *Saṃghabhedavastu*, and relate episode of Buddha's meeting with the two merchants Trapusa and Bhallika. No. 532, Hoernle Reg.

Mi. xiii. 006. Three frs. of Pōthī fol. in Kuchean language and Slanting Gupta; not yet read or identified. Small and badly damaged; stiff whitish paper. No. 533, Hoernle Reg.

Mi. xiv. 1. Fr. of Pōthī fol., L. end with fol. No. 939, and 6 ll. in Skr. and Slanting Gupta. Read and transcribed by Prof. de la Vallée Poussin in *J.R.A.S.*, 1913, p. 855. No. 534, Hoernle Reg. $4\frac{5}{8}'' \times 3''$.

Mi. E. 001. Three minute frs. of Pōthī in Kuchean language and Slanting Gupta. One from L. end of fol. showing fol. No. 8 (?). No. 535, Hoernle Reg.

Mi. vii. 1. Fr. of painted and inscr. wood, apparently from base of panel painted with figs. of Bodhisattvas; showing remains of six lotus pedestals of those figs., and below them one l. writing in clear Kuchean script, divided in five compartments, corresponding to the five lotuses above them, and giving apparently the names of the figures. Two syllables in first compartment illegible. No. 536, Hoernle Reg. $1' 9\frac{1}{2}'' \times 2''$.

Mi. xxi. 002. Inscribed wooden post, octagonal in section, pointed at one end; much worm-eaten and fissured. Inscr. with (apparently) 8 ll. writing in large Upright Gupta chars. and Khotanese language, running parallel along length from head to point; mostly illegible from faintness and fissures. No. 537, Hoernle Reg. H. $2' 5\frac{1}{2}''$; diam. 4″.

Khora. 005. a, b. Two frs. of two Pōthīs of stiff, whitish paper, much damaged, in Skr. and Slanting Gupta, containing hymns of Mātṛceṭa.

(1) Fr. of the *Catuḥśataka-stotra*, containing portions of chap. i, verses 1–12; 5 ll. on page; $9\frac{2}{5}'' \times 2\frac{4}{5}''$; full length about 15″. (2) Small fr., $4\frac{1}{8}'' \times 1\frac{3}{4}''$, of the *Śatapañcāśatika-stotra*, containing portions of verses 146–50, or, as numbered in our MS., verses 10–14. The full size of fol. must have been about $9'' \times 1\frac{3}{4}''$.

Both frs. described and transcribed in Hoernle, *Buddhist Literature from Eastern Turkestan*, i. pp. 73–80. No. 540, Hoernle Reg.

Khora. 005. c. Small fr. of Pōthī fol.; from middle of upper edge, stiff, whitish paper, with remains of 2 ll. writing and traces of 3rd l. on either page, in Kuchean language, Slanting Gupta chars. Fol. No. lost. Purport unknown. No. 541, Hoernle Reg.

IV.—MANUSCRIPTS IN SANSKRIT, KHOTANESE, AND KUCHEAN FROM WALLED-UP CHAPEL OF CH'IEN-FO-TUNG, TUN-HUANG

(See above, pp. 913 sqq.)

Ch. 0041. Roll, complete; dun-coloured paper, slightly damaged along edges. Inscr. on rev. with 151 ll., in corrupt Skr. and Cursive Gupta; on obv. Chin. language.

Contents: combination of two *dhāraṇīs*; for first, ending in middle of 10th l., the *Uṣṇīṣa-vijaya*, see *Anecdota Oxon.*, i. pt. iii, pp. 9, 22, 35, 36: for second, the *Tathāgatoṣṇīṣa-sitātapatranāmā Aparijitā Mahāpratyaṅgirā*, see *J.R.A.S.*, 1911, pp. 460–61. Valuable on account of the light thrown by its Skr. corruptions on phonetics of Khotanese. No. 1, Hoernle Reg. $10' 10'' \times 10\frac{1}{2}''$. Pl. CXLVII.

Ch. 0042. Roll, complete; dun-coloured paper, slightly damaged along edges. Inscr. on obv. with Chin.; on rev. with series of separate entries in Khotanese and Cursive Gupta script; which, however, are to be read in opposite directions from the two ends of roll.

Contents: (1) to be read from top end, 5 or 6 short entries, giving fragments of Khotanese alphabet; (2) from the bottom end, 6 or 7 very short entries, containing the date *asa salya ḫadyaja māśte kṣausimya haḍe*, i. e. 'The Horse (Skr. *aśva*) year, in the Ḫadyaja month, on the sixth day'; and seal. No. 2, Hoernle Reg. $6' 5'' \times 10''$.

Ch. 0043. Roll, complete; dun-coloured paper, damaged at upper edge. Inscr. on obv. with Chin.; on rev. with about 48 ll. of writing in very rude Cursive Gupta and

Khotanese language. Contents not identified. No. 3, Hoernle Reg. 4' 0" × 10". Pl. CXLVII.

Ch. 0044. Roll, practically complete; dirty dun-coloured paper, much damaged in the upper portion (*c.* 10 ft.) and along middle and R. edge. Inscr. on obv. with Chin., on rev. with 70 ll. in Cursive Gupta chars. and bad Skr. language; remaining space, *c.* 18 ft., blank.

Contents: *Kauśaki-prajñā-pāramitā*. See *J.R.A.S.*, 1911, p. 473. No. 4, Hoernle Reg. 23' 10" × 10". Pl. CXLVII.

Ch. 0045. Roll, incomplete; on dun-coloured paper; fr. torn off a roll. On rev. portions of 12 ll. in Cursive Gupta chars. and Khotanese language. No. 5, Hoernle Reg. 15½" × 4¾".

Ch. 0046. Roll, three sets of small frs. apparently from three different rolls. (1) Three torn frs. of dirty brown colour, inscr. on rev. with Cursive Gupta chars., in Khotanese. (2) Three torn frs. of dun-coloured paper; each inscr. on rev. with identical remarks in Khotanese and Cursive Gupta. (3) One large and one small fr. inscr. on rev. with Cursive Gupta alphabetic table, but not in usual order. Quoted in *J.R.A.S.*, 1911, p. 458, and shown, *ib.*, Pl. IV. No. 5 (con.), Hoernle Reg.

Ch. 0047. Roll, practically complete but lower end damaged. Inscr. on rev. with 35 ll. in fair Cursive Gupta script, partly in Khotanese, partly in corrupt Skr.

Contents: text commences with 14 ll. in Khotanese, not identified. Then follow 10 verses in corrupt Skr., and finally, short sentence in Khotanese. No. 6, Hoernle Reg. 2' 3½" × 12¼".

Ch. 0048. Roll, complete; dun-coloured paper, slightly damaged along L. edge; inscr. on obv. with Chin.; on rev., upper portion, with 71 ll. in crude Cursive Gupta and Khotanese language; bottom, about 15", blank. Along top line of writing is faint impression of two seals, apparently Chinese.

Contents: Khotanese text commencing with a date, quoted in *J.R.A.S.*, 1911, p. 470. Then follows Buddhist story with introduction; both quoted, *ibid.*, p. 474. No. 7, Hoernle Reg. 7' 11" × 12⅜".

Ch. 0049. Roll, shapeless fr. torn off larger roll; at bottom, a pasted-on strip, 9¾" × 1¼". Inscr. with 7 ll. in Khotanese and Cursive Gupta. In top line traces of a date. Also another small fr. No. 8, Hoernle Reg. 8½" × 5" to 6".

Ch. 0079. a. Palm-leaf Pōthī, on 69 fols. R. and L. margins of fols. bounded by inked lines. String-hole at 6½" from L. end (or at ⅓ of whole leaf), and between two inked lines crossing from upper to lower edge of leaf; the space between these two lines divides the surface of the fol. into two inscr. areas, the lines of which are, however, continuous. Fol. No. on L. margin of obv. Leaves on the whole well preserved, except some which are mutilated, e.g. fol. 62, which has lost about 6" at R. end; in five fols. L. margin is gone, together with fol. numbers. Six ll. writing on page.

Script an early form of Nepalese, rather than a late form of Upright Indian Gupta. A marked peculiarity is the exaggerated knot attached to foot, and R. side of top of such letters as *ga*, *śa*, *dha*, *tha*, etc. (cf. Nos. 1702 and 1049 of the Table of Letters in Bendall, *Catalogue of Buddhist Sanskrit MSS.*). This points to the eighth or ninth century as date of Pōthī.

The preserved fol. Nos., arranged in centuries, are as follows:—

		Total.
1st cent.	12, 25, 41, 57, 60, 62, 63, 82, 85, 94, 97	11 fols.
2nd cent.	101, 102, 120, 124, 129, 140, 160, 167, 169, 180, 182, 195 ...	12 ,,
3rd cent.	205, 221, 242, 273, 279, 284, 291, 295	8 ,,
4th cent.	310, 317, 343, 364, 373, 395 ...	6 ,,
5th cent.	404, 405, 407, 460, 461, 463, 465, 468, 492, 493	10 ,,
6th cent.	524, 553, 560, 564, 575, 599 ...	6 ,,
7th cent.	None.	0 ,,
8th cent.	721, 771	2 ,,
9th cent.	811, 813, 860, 865, 866, 893, 894, 895	8 ,,
10th cent.	913	1 ,,
	Total	64 ,,

In four of existing fols. (310 *b*ii, 395 *b*vi, 895 *a*i, *c*iv) there occur numeral figures, marking the end of a section, but without mentioning the name of the work.

From the non-consecutive order of figures (28, 77, 65) it is clear that they do not indicate sections or chapters, but either subsections or the number of verses in the subsections. Bendall (*loc. cit.*, p. 2, l. 21) says with reference to the *Aṣṭasāhasrikā* that the figures refer to the number of verses in each chapter; and that, no doubt, is correct with regard to the *Aṣṭasāhasrikā* redaction; for the total of figures amounts to 8,164. All the redactions of the *Prajñā-pāramitā* are written in prose; and the Indian method of estimating the extent of prose writing is to count the number of Ślokas (aggregate of 32 Akṣaras) contained within it. On the other hand, a similar remark of Bendall (*loc. cit.*, p. 146, l. 6) leaves it doubtful whether he took the figures to refer to 'subdivisions' or to the verses contained in a 'subdivision'. This doubt can be set at rest only by referring to an actual complete MS. of the *Śatasāhasrikā*, such as is not accessible to me.

From colophon of unnumbered fol. (*c*iv) it is seen that the surviving fols. belong to one of the redactions of the *Prajñā-pāramitā*. This may be seen also from many other passages: e.g. on fol. 25 *a*i.

Seeing that the last extant fol. is numbered 913, and that there are 12 ll. on each fol., with about 96 Akṣaras (or 3 Ślokas) on each line, i.e. 36 Ślokas on each fol., it follows that 913 fols. yield a total of 32,868 Ślokas. Now there are five redactions of the *Prajñā-pāramitā*, of 125,000, 100,000, 25,000, 10,000, and 8,000 Ślokas respectively. The total of 32,868 excludes the last three redactions. It can belong only to either the redaction of 125,000 or to that of 100,000. The latter is the better known redaction, and our MS. probably belonged to it. On that premise, about two-thirds of the Pōthī are missing; for three times 32,868 comes to 98,604 Ślokas. Now,

according to Rajendralāla Mitra's *Nepalese Buddhist Literature*, p. 177, the *Śatasāhasrikā* comprises 72 chapters, divided into 4 Khāṇḍas. Seeing that our extant Pōthī is about one-third of the whole, it should contain the first and a portion of the second Khāṇḍa. And this conclusion is supported by the figures above quoted (28, 77, 18, 65). For the fact that we have on fol. 310 the figure 28, and on fol. 395 the figure 77, while on fol. 6** (or 7**) there occurs the figure 18, and on fol. 895 the figure 65, suggests that the figures 28 and 77 belong to subsections of the first Khāṇḍa, while the figures 18 and 65 belong to subsections of the second Khāṇḍa. This reasoning, of course, is based on the assumption that these figures do refer to subsections, not to verses in them; and this assumption is far more probable, for the numbers are too small to be referable to Ślokas. No. 9, Hoernle Reg. 1′ 8″ × 2″. Pl. CXLII.

Ch. 0079. b. Pōthī, one palm-leaf fol. of Buddhist text, complete, slightly damaged along top margin, with No. 292 on obv. and 7 ll. on page, written in Skr. and Upright Gupta.

Published by Prof. de la Vallée Poussin in *J.R.A.S.*, 1911, p. 1077. No. 10, Hoernle Reg. $16\frac{5}{8}$″ × $1\frac{7}{8}$″. Pl. CXLII.

Ch. 0092. Roll. Complete; thin, tough, yellowish paper; inscr. on obv. with 79 ll., alternately in early Nāgarī and Sogdian script; last l. in faint red ink. The inscr. portion takes up 3′ 9″ of roll; remainder blank. Rev. blank.

Contents: Skr. text of the *Nīlakaṇṭha-dhāraṇī*, with interlinear Sogdian transcript. For detailed description see Article xix, by MM. de la Vallée Poussin and Gauthiot, *J.R.A.S.*, 1912, p. 629 ff. The last l., in red, contains the abrupt commencement of the *Prajñā-pāramitā*.

Date about 700 A.D., as shown by Prof. S. Lévi in *J.R.A.S.*, 1912, p. 1066. Confirmed by the fact that throughout the *modern* form of *ya* (य) is used, which shows that the script falls after 600 A.D. and is post-Gupta or early Nāgarī. No. 11, Hoernle Reg. 4′ 3″ × $5\frac{3}{4}$″.

Ch. 00120. Roll, practically complete, only one half of 4 ll. at top torn away; dun-coloured paper. Inscr. on obv. with Chin.; on rev. with 93 ll. Cursive Gupta, in Khotanese.

Purport not intelligible. Certain groups of letters or syllables are marked off from one another by the sign for the numeral *one* (⌐) at irregular intervals. Within each group, smaller groups of syllables are marked by the sign of *visarga* (:). See roll Ch. 00265. No. 12, Hoernle Reg. 7′ 10″ × 10″.

Ch. 00262. a–c. Pōthīs; three different, of different sizes, and written in three different hands; but all three in Skr. and Slanting Gupta chars.; published by Prof. de la Vallée Poussin, *J.R.A.S.*, 1913, pp. 843–50:

(1) Two portions of Pōthī, damaged along upper margin and L. end; with 4 ll. writing on each fol. (*a*) consists of 6 fols. with legible Nos. 44, 45, 93, and illegible 90, 91, 92, containing a series of Śikṣās, numbered 1–15 and 14–41. (*b*) consists of 3 fols. numbered 123–5, and contains the Karmavācā. 7″ × $2\frac{3}{8}$″.

(2) Two portions of another Pōthī, damaged along lower margin; 4 ll. writing on each fol. (*a*) consists of one fol. numbered 25, apparently on obv., and contains, on rev. l. 4, the end of *Caitya-catuṣka-sūtra*, and beginning of another Sūtra. (*b*) also consists of one fol., with no number, being apparently a fly-leaf, inscr. on both sides in a crude hand with a short *dhāraṇī*. $6\frac{1}{8}$″ × 2″.

(3) Three fols. of the third Pōthī, damaged along upper margin. Fol. No. 6 is legible on one; on the two others it is illegible; 5 ll. writing on each fol. They contain, according to Prof. de la Vallée Poussin, an Anthology. No. 13, Hoernle Reg. 7″ × $2\frac{1}{4}$″.

Ch. 00263. Roll, complete; thick stiff dun-coloured paper. Inscr. on obv. with Chin.; on rev. with 25 ll. good Cursive Gupta in Khotanese language; last 8 ll. enclosed between straight, black ink, guiding lines.

Purport and spelling apparently similar to that in Ch. 00267. No. 14, Hoernle Reg. 3′ 4″ × $10\frac{1}{4}$″.

Ch. 00264. Roll. Complete, except a slight damage at lower end; inscr. on obv. with Chinese. Rev. blank, except about 9″ at the lower end, which are covered with 3 ll. of faded cursive writing and 5 ll. of well-preserved writing in Upright Gupta chars. These ll. contain incomplete tables (*siddham*) of the alphabetical and numeral radicals and syllables. No. 15, Hoernle Reg. 15′ 2″ × $10\frac{1}{2}$″.

Ch. 00265. Roll, incomplete; portions of unknown length lost at top and bottom. Inscr. on obv. with Chin.; on rev. with Khotanese text in 42 extant ll., in Cursive Gupta chars., but in fine calligraphic hand.

Contents: series of medical formulae, divided from one another by the sign :: (4 dots); the ingredients and directions within each formula, divided by one dot (.). No. 16, Hoernle Reg. 3′ 1″ × $10\frac{1}{4}$″.

Ch. 00266. Roll, complete; of thin yellowish paper, upper edge damaged, lower edge torn off. Inscr. on obv. with Chin.; on rev. with Cursive Gupta, slovenly writing, in Khotanese, in three divisions:—

First division: 43 ll. followed by blank space of about 2 ft. Second division: 44–223 ll. followed by blank space of about 6 inches. Third division: 224–382 ll.

Second division, apparently some Buddhist story. Third division, some Buddhist Sūtra. No. 17, Hoernle Reg. 26′ 4″ × 10″.

Ch. 00267. Roll, complete; yellowish paper. Inscr. on obv. with Chin.; on rev. with 65 ll. in Cursive Gupta chars. and Khotanese language.

Contains some Buddhist text in verses. Five stanzas marked on ll. 14, 26, 43, 50. Numerous Sanskritic words are interspersed.

The second stanza mentions a number of Bodhisattvas. Text spells regularly *jasta-beysa* for the usual *gyasta-baysa*; and *mimsta* (l. 1) or *maista* (ll. 35, 39) or *mesta* (ll. 47, 51) for the usual *mistä*, great. No. 18, Hoernle Reg. 7′ 5″ × 10″.

Ch. 00268. Roll, practically complete; of rather brittle paper, damaged at upper edge. Inscr. on obv. with Chin.; on rev. with good Cursive Gupta, beginning at 1′ 7″ from upper edge and ending $11\frac{1}{2}$″ from lower edge, in Khotanese; in 228 lines, divided into two portions:—

First portion, ll. 1–131, a text very similar to that in the Gigantic Roll, Ch. c. 001, commencing with salutations to

the several *kula* of superior beings, such as *Ratnottama*, *Ratnāvābhāsa*, etc., down to l. 40; then follows a series of formulas, down to ll. 70, 81, 126, respectively.

Second portion, beginning on l. 132 and ending on l. 228 in middle of a sentence, unfinished, and leaving blank space of 11½" ruled with guide lines in faint red ink; contains a portion (53 verses and a half) of the same religious poem which is preserved in Pōthī, Ch. 00277, and which may be the Khotanese version of the Skr. *Śatapañcāśatika-stotra* of Mātṛceṭa. It may be noted that the usual semicircular sign, as in *baysa*, is in this roll made angular, *baysa*. No. 19, Hoernle Reg. 27′ 6″ × 10″.

Ch. 00269. Roll, practically complete, but damaged at upper end, about 6″; stiff dun-coloured paper. Covered, on obv., with Chin.; on rev. about 8′ 4″ covered with 120 ll. (counting from below the damage) of Cursive Gupta writing in Khotanese, divided into several paragraphs, marked off by two dots (..). The longest comprises ll. 24–108, but four ll. (66–9) are crossed through. The last paragraph, from l. 111, treating of *haudi ṛispūra* or 'seven Rājaputra', is written with a different pen and lighter ink than the rest.

In the long paragraphs several *ṛispūri* are spoken of, e.g. l. 25, l. 40, etc. No. 20, Hoernle Reg. 30′ 9″ × 10½″.

Ch. 00270. Roll, fr. only, on dun-coloured paper. Inscr. on obv. with Chin.; on rev. with 14 ll. Cursive Gupta in Khotanese; much faded, hardly legible, and not intelligible. No. 21, Hoernle Reg. 1′ 4½″ × 10″.

Ch. 00271. Roll, fr. only; of tough, thick, dun-coloured paper, defective at top and bottom. Writing in Cursive Gupta, frequently faded and mostly very bad.

Begins with mere scrawls. Then in good black writing table of numeral radicals, from 1 to 100,000. Then a date, only partially legible, *lye Cvātaji masti 24mye haḍai*—below it *25mye haḍai*; i.e. 'year?, Cvātaji month, 24th day, and 25th day'. Then, in a pupil's hand, incomplete series of numeral radicals, omitting 1, 2, 3, 9. Finally, 10 ll. writing, partly illegible; cf. Ch. c. 002. No. 22, Hoernle Reg. 3′ 11″ × 10″.

Ch. 00272. Roll, complete; on thin yellowish paper, mended at upper end and mounted on wooden spindle. Covered on obv. with Chin.; on rev., Khotanese script in Cursive Gupta. In part, alphabetic and syllabic tables; in part, some Buddhist text. In some places disfigured by most disorderly writing, as of a child or illiterate person.

ll. 1–5, detached remarks in faded ink; ll. 6–10, table of alphabetical and numeral radicals, with dissociated *g–h*, *j–h*, *d–h*, *b–h*, and omitting cerebrals as well as dental *s*; ll. 11, 17, 34, and 35, unintelligible scrawls; ll. 12–16, repetition of above table; ll. 18–33, syllabary in three divisions; ll. 36–62, long statement, beginning and ending with a date; l. 37, *mārija māśtai dasamye haḍai*, 'in the Mārija month, tenth day'; l. 60, *caulasamyi kṣauṇa pvaisa salya kaja māśtai hasta-bestamyi haḍai*, i.e. 'in the fourteenth period, *pvaisa* year, *kaja* month, twenty-eighth day'; ll. 63–7, remarks in faded ink; ll. 68–78, ordinary table of alphabetical and numerical radicals and syllabary, the latter incomplete; ll. 79–86, another statement, but without any date, followed by some lines of unintelligible scrawls. No. 23, Hoernle Reg. 10′ 2″ × 10″.

Ch. 00273. Roll, complete; thick tough yellowish paper. Covered on obv. with Chin. writing; on rev. with Cursive Gupta, 19 ll., covering only 1′ 10″, the remainder being blank. Begins with table of alphabetical and numeral radicals in 5 ll. followed by syllabary in 14 ll.

The alphabetical scheme is the special one which dissociates the sonant aspirates, *g–ha*, *j–ha*, as in roll Ch. 0046 and 00272. The syllabary is incomplete, only extending to the *da*, *dā* series. Also *siddham* is repeated with each Varga, or class. No. 24, Hoernle Reg. 25′ 3″ × 10″.

Ch. 00274. Pōthī, apparently complete, on thick tough paper; clean and well preserved; 4 ll. on page, marginal and guiding lines also in black; and small circle, ⅞″ diam., and 3⅜″ off L. edge. Fol. Nos. in L. margin, obv. Total of fols. 39, all preserved.

The whole in Khotanese and Upright Gupta; but on last fol. 39, 2 ll. of obv., and all 4 ll. rev. are in Cursive Gupta. Contents, some Buddhist text, not yet identified. No. 25, Hoernle Reg. 14¼″ × 2¼″. Pl. CL.

Ch. 00275 and xlvi. 0012. a. Pōthī, complete, in Khotanese and Upright Gupta; on coarse, thick, tough paper; 4 ll. black ink writing on p.; marginal and guiding lines in faint red ink; small circle, ⅞″ diam., ¾″ off L. edge, in black ink. Soiled and damaged by water. Fols. 33, viz. Nos. 1–10, 15, 20–38, 40, 42, 44, in Ch. 00275; and 8 fols., viz. 15–19, 39, 41, 43, in Ch. xlvi. 0012. a. Fol. Nos. on L. margin, obv.

Obv. of first fol. covered with disorderly scrawls in Cursive Gupta chars., among which occurs the title *Vajracchedikā Prajñā-pāramitā*; in L. lower corner, ink impression of oblong seal. In centre of rev. of first fol. large fig. of sitting Buddha in outline, within two concentric circles; and L. upper corner, an ornamental, coloured, small circle or wheel. On rev. of 3rd fol., facing 2nd l. of writing, the same circle or wheel, indicating end of Introduction and beginning of sacred text. On obv. of 42nd fol., in centre, two large concentric circles with blank interior space, intended for fig. of Buddha, but left vacant. On rev. of last (44th) fol., in centre, a similar large circle, enclosing fully drawn fig. of sitting Buddha; also in L. lower corner, small ornamental circle (as on 1st fol.) enclosing small fig. of sitting Buddha.

Contents: Text of *Vajracchedikā*, with introduction and conclusion in verse; ed. by Prof. Sten Konow in Vol. i of *MS. Remains of Buddhist Literature*.

No. 26, Hoernle Reg. 10⅛″ × 2⅞″. Pl. CXLIX.

Ch. 00276. Pōthī; in Upright Gupta, containing mere series of salutations to Bodhisattvas. Incomplete, on coarse thick paper; somewhat soiled by water; 2 ll. of large, black ink writing on page. No guiding lines, nor interior small circle. On L. side, broad margin, *c.* 1⅝″ wide, orn. with pair of finely drawn figs. of Buddha, sitting on *siṃhāsana*, on both obv. and rev. of fols. 3, 4, 9, but left blank on fols. 11, 12, 14. On fol. 18, L. margin is the ordinary one of ½″ with fol. No. On fol. 12 rev., and fol. 14 obv., there are floral designs between the two ll. Total No. of surviving fols., 7; viz. Nos. 3, 4, 9, 11, 12, 14, 18; missing: Nos. 1–2, 5–8, 10, 13,

15–17. Rev. of fol. 18 is blank, and concludes Pōthī. No. 27, Hoernle Reg. $10\frac{7}{8}'' \times 2\frac{1}{4}''$. Pl. CLII.

Ch. 00277. Pōthī, incomplete, in Khotanese and Cursive Gupta script. Good strong paper, clean and well preserved. Three ll. black ink writing on page, but marginal and guiding lines in faint red ink; so also interior small circle, $\frac{3}{4}''$ diam., $2\frac{1}{2}''$ off L. edge, and numbering of verses of text. At beginning of Pōthī (rev. of 1st fol.), two small concentric circles; inner red, outer black. The word *baysa*, where it occurs, also in red ink. Total no. of surviving fols., 12; viz. Nos. 1–11 and a cancelled fol. 10. The fols. numbering 12 ff. are missing.

Contents: Some Buddhist Stotra not yet identified, possibly a translation of one of Mātṛceṭa. In stanzas of four *pādas* each, beginning: *Siddham* | *Drabādva namasū baysa · avarūṣyi baysau dā*: the word *baysa* being in red ink. Fol. 11 closes with the first 3 Akṣaras (*karma bai*) of the 3rd *pāda* of the 39th stanza. On fol. 10 the scribe had omitted the 4th *pāda* of the 32nd and the two first *pādas* of the 33rd stanzas; hence that fol. was cancelled (its rev. is blank), and the scribe commenced a fresh fol. 10, with the omitted *pādas*, but the cancelled fol. 10 was not destroyed. Stanzas numbered in red ink from 1 to 38. MS. possibly never completed. Another copy of this Stotra occurs in the fr. Ch. xlvi. 0013. a. (No. 51) and another fuller copy in roll Ch. 00268 (No. 19). The two last-mentioned agree more closely in their text, while they differ slightly from the text in the present Pōthī. Moreover, a comparison of our text with that of the roll shows blunders in the numbering of the verses in our Pōthī. The number 11 occurs twice and 15 is omitted. Again, the two numbers 28 and 29 are omitted. In fact, our Pōthī contains only 37 verses, not 39. The text of the roll extends to 53 verses and a half. No. 28, Hoernle Reg. $7\frac{1}{8}'' \times 2\frac{7}{8}''$. Pl. CLII.

Ch. 00316. a. Pōthī, one complete fol. and three-fourths of another, numbered 22 and 99 respectively, on rev. within blank square surrounding string-hole; with 6 ll. in Kuchean language and Slanting Gupta script; containing a medical text, in the complete fol. on different kinds of food, and in the incomplete on tumours, their signs and remedies. Identified by Prof. Sylvain Lévi. No. 29, Hoernle Reg. $12\frac{1}{4}'' \times 3\frac{1}{2}''$. Pl. CLII.

Ch. 00316. b. Pōthī, one fol. practically complete, damaged at both ends, fol. No. lost; with 6 ll. writing in Kuchean language and Slanting Gupta script; part of 'a short poem, expressing wishes in reference to each section of the Udāna (Dhammapada). Identified by Prof. Sylvain Lévi'. No. 30, Hoernle Reg. $1'\ 2'' \times 3\frac{1}{2}''$. Pl. CLII.

Ch. 00327. Roll, incomplete; stiff yellowish paper; upper portion of unknown length missing. Inscr. on obv. with some Chin. text; on rev. with mutilated text, 10 ll. in Khotanese and Cursive Gupta. No. 31, Hoernle Reg. $3'\ 6\frac{1}{2}'' \times 12\frac{1}{4}''$.

Ch. 00328, 00329. Two frs. of rolls. (1) Inscr. on obv. with Chin.; on rev. with 5 ll. of Buddhist text in Khotanese and Cursive Gupta; apparently forming top of roll. $5\frac{3}{4}'' \times 10''$.

(2) Inscr. on obv. with 5 ll., in Khotanese and Cursive Gupta. Some Buddhist text. Rev. blank. No. 32, Hoernle Reg. $7'' \times 10''$.

Ch. 00330. Roll, incomplete; good stiff light-yellow paper; folded up [concertina fashion] into 18 folds of about $3\frac{1}{4}''$ each; but two folds (one at either end) missing.

Inscr. on obv. with some Chin. text; on rev. with the *Prajñā-pāramitā-hṛdaya-sūtra*, together with Chin. transliteration, arranged in alternate perpendicular columns, to be read from R. to L.; similar to that in the Horiuzi MS. (*Anecd. Oxon.*, ii. pt. iii, table iv. 1, 2, 3), which, however, is arranged in alternate horizontal lines. The extant text commences with *mita-caryaṃ caramāṇo*, and ends with *svāha*; colophon missing. There are occasional slight variations, but in the main the text and transliteration are identical in the two MSS.

The script of the Skr. text in our roll is a beautiful Upright Gupta of the Tibetan type, of a date not earlier than the late seventh century A. D.; for it uses the modern form of *ya* (य) throughout. As a peculiarity it may be noted that it occasionally writes *ntt* for *tt*, and even for *t*; as in *cintta* for *citta*, and *pāraminttā* for *pāramitā*. No. 33, Hoernle Reg. $4'\ 4'' \times 10\frac{1}{4}''$.

Ch. 00331. Roll, very small fr. of irregular shape. Inscr. on obv. with remains of 4 ll. in Khotanese and Cursive Gupta; rev. blank. No. 34, Hoernle Reg. $4\frac{1}{2}'' \times 6\frac{1}{4}''$.

Ch. 00456. Pōthī, small fr. from across middle of fol. with remains of 5 ll. in Sanskrit and Slanting Gupta.

Prob. from some Buddhist work; read by Prof. S. Lévi. No. 59, Hoernle Reg. $1\frac{1}{4}'' \times 2\frac{1}{2}''$.

Ch. i. 0019. Roll, incomplete; thin dun-coloured paper; upper portion of unknown size missing. Covered on obv. with Chin. writing, on rev. with 38 ll. Cursive Gupta in Khotanese: (1) Cursive table of alphabet, 10 ll.; incomplete; (2) *dhāraṇī*, 23 ll.; (3) Incomplete Buddhist text, not identified, 5 ll. No. 35, Hoernle Reg. $3'\ 4\frac{1}{2}'' \times 9\frac{7}{8}''$.

Ch. i. 0021. a. Roll, large incomplete; on coarse thick buff paper, consisting of two portions of differing sizes, which are sewn together along narrow edge:—

(1) Upper portion, incomplete at top, inscr. on one side with three Chinese records of 3, 8, and 4 columns respectively, separated from one another by blank spaces of 6″ and 9″, and referring to accounts of corn, etc.; other side blank. At lower end sewn to

(2) Lower portion, incomplete at end, and of lesser width; inscr., on both sides, with unidentified Buddhist text, in Khotanese and Cursive Gupta; with exception of space of 6″ at top, where it is sewn on to the upper portion, and inscr. with 11 columns of large Chin. writing. No. 36, Hoernle Reg. $5'\ 1'' \times 12''$ (upper), $10\frac{1}{4}''$ (lower half).

Ch. i. 0021. b. Roll, complete except for small blank piece torn off at top. Covered on both sides with writing in Khotanese and Cursive Gupta. Consists of two unidentified Buddhist texts, written in opposite directions; one text covering whole of one side and half of other, while other text covers other half, beginning at bottom of that side, so that the endings of the two texts meet in its middle. No. 36, Hoernle Reg. $3'\ 4\frac{1}{4}'' \times 6\frac{3}{4}''$.

Ch. i. 0021. c. Roll, incomplete. Inscr. on obv. with unidentified Buddhist text; on rev. with detached remarks in different handwritings of different sizes; also with large sq. red seal; the whole in Cursive Gupta.

The text in corrupt Skr. and in verses (Indravajra), of which 14 are extant. The first in correct Skr. would be as follows:—

Devāsurā yakṣabhujaṃgasiddhās takṣasuparṇakaṭapūtanāś-ca | gandharvayakṣā grahajālayaśca ye keci(d) bhūmiṃ nivasaṃti daivāḥ ||. No. 36, Hoernle Reg. 1′ 1¼″ × 6¼″.

Ch. ii. 001. Roll, incomplete at top and bottom; coarse brittle brownish paper, much damaged in middle and along R. edge. Inscr. on both sides, obv. with 24, rev. with 10 ll. of unidentified Buddhist text, in Khotanese and Cursive Gupta. No. 37, Hoernle Reg. 1′ 6¾″ × 12″.

Ch. ii. 002. Pōthī; incomplete, in 156 fols. on coarse tough paper; with 5 ll. on page, in Khotanese language and Upright Gupta, suspended from inked guiding lines, and marked off from R. and L. margin by inked lines. Fol. Nos. on obv., within inked circle for string-hole. There is no string-hole, but only very minute perforation made by leg of pair of compasses.

Total of surviving fols. 65. Their numbers are 1–20, 100–108, 121–56 (but 154 is missing), amounting to 64. Of these No. 1 is blank on obv., excepting the following short remark $\frac{50}{6}$ *patra sedasāraṃ*, written in Cursive Gupta. On its rev., the text commences with *Saddhaṃ Aurga* (salutation) *tsuṃ ramnāṃ drrim nä* (*triratna*) *ṣadi-jsa* (*śraddha*) *bodya*, preceded by double circle, and followed (on l. 2) by name of work, *Siddhasārä śāsträ*. In addition to these 64 fols. there is one marked as fol. No. 1, but containing the end of the work, and followed on rev. ll. 3–5 by the following colophon: *hi*(*iti*) *dvāṃgye vije ukrre hīvī Siṃdhasārä nāṃnan Śāsträ*) || etc. || *kṣaya*.

There occur short remarks in a Semitic script (Uigur ?), in black ink along L. margin of rev. of fol. 156, and in red ink along L. margin of obv. of fols. 100 and 101, as well as across the 5th l. of rev. of fol. 135. These throw light on the nationality of the scribe or copyist; so also the circumstance that the colophon (on the extra fol. No. 1) ends with the word *kṣaya*, indicating in Semitic fashion (*faqt*) the end of the work; so further the absence of a string-hole, which shows that the fols. were not meant to be strung upon a string in the ordinary Indian fashion of a Pōthī.

The MS. contains a medical work on Therapeutics, the *Siddhasāraśāstra* by Ravigupta. The chapters (*piṣkala*) 12–26 appear to be the best preserved, treating of *arśas, bhagandara, pāṇḍu-roga, hikkā, śvāsa, kāsa, mūtra-kṛcchra, udāvarta, unmāda, apasmāra, vātavyādhi, visarpa, krimi, netra-roga*.

On blank obv. of 1st fol. is the record *56 patra Sedasāraṃ*, i.e. 56 fols. of *Siddhasāra*; which shows that the Pōthī was already in the present fragmentary condition when the record was inscribed. Possibly it was the original MS., from which the present MS. was transcribed, which was defective. In any case there is a clerical blunder in the record of '56 folios'; in all probability it should be '156 folios', for *that* is the actual number of fols., barring the extra fol. with colophon. No. 38, Hoernle Reg. 19½″ × 4″. Pl. CXLIX.

Ch. ii. 003. Pōthī, incomplete, 71 fols., in Khotanese and Cursive Gupta; good tough paper, clean and well preserved. Five ll. on page; also marginal and guiding lines in faint black ink; so also interior small circle, 1″ diam., 3″ off L. edge. The fols. are numbered by four different systems:—

(1) The ordinary system, by numbers on L. margin of obv.; beginning with 44, and running up to 115. The last fol. has no number; it should be 116, but as it is marked with 3 in the interior circle, while fol. 115 is similarly marked with 1, it would seem that the unnumbered fol. is really 117, and that fol. 116 is missing;

(2) by numbers in the interior circle, beginning with 1 on fol. 44, and running to 54 on fol. 99; whence, on fol. 100, it recommences with 1, followed by 2 on fol. 101; after which this system of numbering ceases;

(3) by a series of dots on edge of L. upper corner of obv. This commences with one dot on fol. 100 and runs as far as the last unnumbered fol.; hence fol. 101 has 2 dots and fol. 109 has 10 dots. Here commences an error: fol. 110 has again 10 dots, and fol. 111 has 11 dots instead of 12; fol. 112 has correctly 13 dots; but fol. 113 is again wrong with 13 dots; so also fols. 114, 115 with 14 and 15 dots instead of 15, 16. The last unnumbered fol. has 17 dots, which suggested the conclusion that there is really one fol. missing, and that the unnumbered fol. is 117;

(4) by strokes in the interior circle. This begins with one stroke on fol. 115, and is continued on the last unnumbered folio, with 3 strokes.

There is an error in the ordinary numbering on L. margin. Fol. 69 has two Nos., 69 and 71; the No. 70 is omitted, but there is no fol. 70 missing, as the other system of numbering shows. There has been simply a blunder on the part of the scribe, which he corrected. In the top of L. rev. margin of fol. 86, there stands the No. 3. Similarly on fols. 87 and 93, there are the Nos. 7 and 17, 8 and 18 respectively.

Contents: medical formulary, similar to the *Nāvanītaka* formulary in the Bower MS.; the surviving fols. contain formulae for *ghṛta* (medicated clarified butter) and for *cūrṇa* (compound powder). So far two or three have been identified in the *Caraka-saṃhitā*, and one in the *Bheḍa-saṃhitā*. No. 39, Hoernle Reg. 11¾″ × 3¼″. Pl. CL.

Ch. ii. 004. Pōthī, small, complete, in Cursive Gupta, well written in the text, but very badly in the interlinear portions, and Khotanese language; good strong paper. 4 ll., in black ink, on page; with marginal and guiding lines in faint red ink; small interior circle, also in red ink, 1″ diam., 4½″ off L. edge. Much interlinear writing on rev. of 1st fol., obv. of 2nd, and rev. of 3rd fol. Total No. of fols. 4; fol. Nos. being on L. margin of obv.; in the case of 1st fol. it is within the interior circlet. Rev. of fol. 4 is blank of text, but inscr. with 2 ll. very large Tib. seal-writing, in black ink.

Contents: some *dhāraṇī*, not yet identified. No. 40, Hoernle Reg. 1′ 2⅜″ × 2¾″. Pl. CLII.

Ch. vii. 001. a. Pōthī, 12 detached fols., more or less damaged at both ends; fol. Nos. wanting; 6 ll. writing in Skr. and Slanting Gupta, size and hand the same as in fols. of Nos. 42, 43, 44.

Contains portions of the *Udānavarga*: viz. (1) vv. 24–42 of Anityavarga (1st chap.) on fol. 1 and 2*b*; (2) vv. 1–19 of Kāmavarga (2nd chap.) on fols. 2*b* and 3; (3) vv. 18–20 of Mārgavarga (12th chap.) on fol. 4*a*; (4) vv. 1–12 of Satkāravarga (13th chap.) on fol. 4; (5) vv. 8–18 of Tathāgatavarga (21st chap.) on fol. 5; (6) vv. 1 and 2 of Śrutavarga (22nd chap.) on fol. 5*b*; (7) vv. 39–54 of Yugavarga (29th chap.) on fol. 6; (8) vv. 26–39 of Sukhavarga (30th chap.) on fols. 7, 8, 9*a*; (9) vv. 1–38 of Cittavarga (31st chap.) on fols. 9*a*, 10, 11; (10) vv. 14–28 of Bhikṣuvarga (32nd chap.) on fol. 12.

Published by Prof. de la Vallée Poussin, *J.R.A.S.*, 1912, pp. 355 ff. Cf. Pischel, *Turfan Recension des Dhammapada*, *S.B.A.W.*, Berlin, 1908, p. 968, and Rockhill, *Orig. of Dharmatrāta's Udānavarga, transl. from the Tibetan*, London, 1883. No. 41, Hoernle Reg. 1′2¼″ × 3½″. Pl. CXLIII.

Ch. vii. 001. b. Pōthī, incomplete, in Sanskrit and Slanting Gupta; 3 fols. practically complete, but two slightly damaged on R. and third on L. Fol. Nos. of former seem to be 6 and 7; that of latter lost. Apparently of same size and hand as No. 41; 6 ll. to page.

Contain verses 48–74 and 117–31 of the *Śatapañcāśatika-stotra* by Mātṛceṭa. Identified and published by Prof. de la Vallée Poussin in *J.R.A.S.*, 1911, pp. 762 ff. See also *MS. Remains of Buddhist Literature*, vol. i. pp. 64–75. No. 42, Hoernle Reg. 1′2¼″ × 3½″.

Ch. vii. 001. c. Pōthī; 1 fol. practically complete, though slightly damaged at both ends. Contains verses 41–51 of an unidentified Stotra, in Sanskrit and Slanting Gupta; 6 ll., in same hand and size as No. 41. Identified by Prof. de la Vallée Poussin. No. 43, Hoernle Reg. 1′2¼″ × 3½″.

Ch. vii. 001. d. Pōthī; 1 fol. complete, same hand and size as fols. of Nos. 41–43; with 6 ll. in Sanskrit and Slanting Gupta; fol. No. 108 (faint) on rev.

Belongs to the *Daśabala-sūtra* and describes the first six of the ten *balas*. Final fol. of this Sūtra is in Pelliot Collection, as stated by Prof. Sylvain Lévi in *J. As.*, S. x, vol. xvi, p. 440. See *Aṅguttara Nikāya*, v. p. 33. Identified and published by Prof. de la Vallée Poussin, *J.R.A.S.*, 1911, p. 1063. No. 44, Hoernle Reg. 1′2¼″ × 3½″.

Ch. xviii. 001. Pōthī, in Khotanese and Upright Gupta. Small fr. of large fol., with 5 surviving ll. Contents: probably Buddhist canonical text. No. 45, Hoernle Reg. *c.* 4″ × 6″; height of Akṣaras ½″–¾″.

Ch. xl. 002. Roll, complete; dun-coloured paper with one long and two short rents; inscr. on obv. with Chin. writing and long line of Cursive Gupta, in Khotanese, along L. margin; on rev. 65 ll. Cursive Gupta.

Contents: ll. 1–53, alphabetic and syllabic tables; ll. 54–65, a paragraph (apparently) of instructions or explanations. The commencement of the first, incomplete, syllabary suggests that this roll is the continuation of another, apparently roll Ch. lviii. 007. See *J.R.A.S.*, 1911, p. 452, Pl. II. No. 46, Hoernle Reg. 6′5″ × 10½″.

Ch. xl. 003. Roll, complete; dun-coloured paper, clean and well preserved. Entirely covered on obv. with Chin. writing; rev. blank excepting 4 or 5″ at lower end, inscr. with alphabetic and numeral table, quoted in *J.R.A.S.*, 1911, p. 455. No. 47, Hoernle Reg. 22′1″ × 10″.

Ch. xliii. 001. Pōthī; three complete fols., but damaged by water at both ends, though preserving fol. Nos. 130, 131, 132 (unit figures uncertain), with 6 ll. writing in Sanskrit and Slanting Gupta. Size and hand same as in Nos. 41–44; hence all these seem to constitute one single Pōthī, containing a collection of several Sūtras.

Contains end of *Nāgarōpama-sūtra* (or °*vyākaraṇa*) and beginning of charm against serpents; cf. Cullavagga, v. 6. 1, etc. Identified and published by Prof. de la Vallée Poussin in *J.R.A.S.*, 1911, pp. 772 ff. No. 48, Hoernle Reg. 1′2¼″ × 3½″.

Ch. xlvi. 0012. b. Fr. of Pōthī; only one fol., in Khotanese and Upright Gupta; 3 ll. large black ink writing, without interior circlet or fol. No. Contents not identified. No. 49, Hoernle Reg. 9⅜″ × 2⅔″. Pl. CLII.

Ch. xlvi. 0012. c. Fr. of Pōthī, in Khotanese and Upright Gupta; only one fol., on good thick paper; 3 ll., in red ink, on page; marginal and guiding lines also in faint red ink; so also interior circlet, 1″ diam., 2½″ off L. edge. Fol. No. on L. margin, 3.

Contents not identified; apparently some *Prajñā-pāramitā*. No. 50, Hoernle Reg. 9″ × 2¼″. Pl. CLII.

Ch. xlvi. 0013. a. Fr. of Pōthī, in Khotanese and Cursive Gupta, being first fol. only, inscr. on obv. and then discarded; good thin yellowish paper, the same as in Ch. xlvi. 0013. b; 3 ll. large black ink writing; marginal and guiding lines in faint black ink; so also interior circlet, ¾″ diam., 3¼″ off L. edge.

Contents: some Buddhist Stotra; commences exactly as in Pōthī, Ch. 00277. No. 51, Hoernle Reg. 10⅞″ × 2½″.

Ch. xlvi. 0013. b. Fr. of Pōthī, in Khotanese and Cursive Gupta; one fol.; blank on rev.; good thin yellowish paper; 4 ll. large black ink writing on obv.; marginal and guide-lines in faint black ink; no interior circlet, nor any fol. No. Rev. blank, but has similar marginal and guide-lines, showing that writing on it was intended.

Contents: portion of *Aparimitāyuḥ-sūtra*. The text is exactly identical with that on obv. of fol. 7 of Pōthī Ch. xlvi. 0015. That Pōthī is written in Upright Gupta; but its fols. 7 and 8, being lost, were replaced by fresh fols. 7 and 8 written in Cursive Gupta. It may be suggested that possibly the present fol. was begun to serve as substitute, but for some reason discarded. No. 52, Hoernle Reg. 12″ × 2½″. Pl. CLII.

Ch. xlvi. 0015. Pōthī, complete, in Khotanese and Upright Gupta; on coarse tough paper; 4 ll., in black ink, on page. Side margins, ½″ wide, marked off by vertical lines in light red ink; small circle, ⅞″ diam., 3″ from L. edge, as well as guiding lines, also in light red ink. Fol. Nos. on L. margin, obv.

No. of fols. 20. All, except fols. 7 and 8, written in Upright Gupta chars.; fols. 7 and 8, in Cursive Gupta, added later to compensate loss of two orig. leaves, measure only 12" × 2½". In upper L. corner, a small red and green coloured fig. of sitting Buddha, within a black ink circle.

Contents: *Aparimitāyuḥ-sūtra*, ed. by Prof. Sten Konow in *MS. Remains of Buddhist Literature*, pp. 289–329. No. 53, Hoernle Reg. 13⅝" × 2½". Pl. CL.

Ch. lviii. 007. Roll, complete; of hard dun-coloured paper mended at lower end. Inscr. on obv. with Chin. writing; on rev. with 71 ll. of fine Cursive Gupta, showing a series of syllabaries, as explained in *J.R.A.S.*, 1911, pp. 452 ff. and Pl. I. No. 54, Hoernle Reg. 10' 9" × 10⅜". Pl. CXLV.

Ch. lxviii. 001. Pōthī, incomplete, in Khotanese and Upright Gupta. Only one complete fol.; on coarse yellowish paper; 12 ll. black ink writing on page; letters, from ½" to ¾". Marginal and guiding lines in faint black ink; so also inner circlet, 2⅜" diam., 9" off L. edge. A small piece torn out of upper side. Fol. No. 255 on L. margin of rev.

Contents: some Buddhist canonical text, not identified. No. 55, Hoernle Reg. 30½" × 12¾". Pl. CXLVIII.

Ch. c. 001. Roll, complete, of gigantic size; thick tough dun-coloured paper; small portion, perhaps 3" or 4", torn off top. Inside, wholly covered with writing, mostly in Upright, exceptionally in Cursive Gupta chars. and in corrupt Sanskrit or in Khotanese language. Outside, blank, except for parti-coloured figure at top, representing two geese facing each other, standing on two lotuses intertwined, and holding budding stalks in their bills.

Contents: three Buddhist texts, in Upright Gupta and corrupt Sanskrit; also three statements, in Cursive Gupta script and Khotanese language; finally, short series of salutations, in Upright Gupta and corrupt Sanskrit; for details, see *J.R.A.S.*, 1911, pp. 471 ff. No. 56, Hoernle Reg. 70' 10" × 10½". Pl. CXLVI.

Ch. c. 002. Roll, complete; ordinary dun-coloured paper damaged at top and elsewhere. Inscr. on obv. with Chin. writing; on rev. with alphabetic and syllabic tables in Gupta chars.

The interest of this roll is that it shows the procedure in a Buddhist monastic school An old Chinese roll was used as a sort of 'Exercise book' for beginners in writing. There are altogether 113 lines of writing. The initial 35 lines begin with illegible scrawls; then very disorderly series of alphabetical radicals, omitting the cerebrals, but gradually improving. Now comes, on ll. 36–40, a complete so-called '*Siddham*' or table of alphabetical and numeral radicals, followed on ll. 41–9 by a syllabary, though not complete, but only from *ka*, *kā*, etc., down to *jha*, *jhā*, etc. The whole very carefully and calligraphically written without guiding lines, evidently as a pattern, by the master, to be copied by the pupil.

Then, on ll. 50–92, come 17 copies written by the pupil with guide-lines, and showing progressive skill; at first more or less disorderly, afterwards (from l. 64) in good order. These copies, however, include only the alphabetical radicals, from *ka* to *kha*. Then, on ll. 92, 93, comes the date of the exercise: *thye ni hvī ji naumye kṣaṇna* (9th period) *asa salya* (horse-year) *ntain Jara māśte* (Jara month) *daśamye haḍe* (tenth day). Then, on ll. 93–104, comes another series of five copies, less well done, perhaps by another pupil. Next, ll. 105–109, a copy of the full table of alphabetical and numeral radicals, but in more or less disorder. Finally, on l. 110, comes the master's calligraphic pattern of the statement: *Sidham ntanta majsa vā pyūṣṭi*, i. e. 'thus it has been heard by me', followed, on ll. 110–13, by four copies of that statement, done by the pupil.

That an old Chinese roll was used in this way is shown by the circumstance that the roll was already damaged by holes which the pupil had to avoid in copying; cf. ll. 60, 63, 70, etc. No. 57, Hoernle Reg. 9' 9" × 10".

Ch. cvi. 001. Document, complete, on coarse thick yellowish paper. Inscr. on obv. with 31 ll. Cursive Gupta; on rev. with 8 ll. of same, followed by 15 ll. large Tib. writing, running in opposite direction; and again followed by 9 ll. of slightly smaller Tib. writing, but running reversely, i. e. in the same direction as the Cursive Gupta at top of page.

Cursive Gupta writing careless and difficult to decipher, e. g. *m* much like *p*; language Khotanese. Begins with a date: *madala salya Cvāvaja māśte beśtimye haḍai*, 'in the Madala year, the Cvāvaja month, the twentieth day'.

On l. 8 from bottom, a phrase is deleted, another substituted in Tib. chars., showing that the Cursive Gupta and Tib. portions are contemporaneous. No. 29, Hoernle Reg. 2' 0½" × 13". Pl. CXLVIII.

V.—REMAINS OF PŌTHĪS AND DOCUMENTS IN SANSKRIT AND KHOTANESE, FROM SITES OF FARHĀD-BĒG-YAILAKI AND KARA-YANTAK

(See above, pp. 1247 sqq., 1253 sq., 1262)

F. I. a. 1. Wooden tablet, inscr. on both sides with Skr. charm (*mantra*), in Ślokas, and in large Upright Gupta chars. 5 ll. each side; part almost illegible. The *mantra* is in faulty language and metre. No. 60, Hoernle Reg. 1' × 4" × ¼". Pl. CLI.

F. II. i. 1. Wooden tablet, complete, oblong with one end pointed; inscr. on either side with 3 ll. writing in Khotanese and Upright Gupta. Apparently a list of names. No. 61, Hoernle Reg. 8¾" × 1¾".

F. II. i. 006. Wooden tablet, complete, but broken into numerous small pieces; inscr. on one side only with 7 ll. writing in Khotanese and Upright Gupta. Purport not determined. No. 62, Hoernle Reg. 9" × 3¼".

F. II. i. 007. Wooden tablet, apparently complete, but

broken into numerous small pieces; inscr. on one side only with 5 ll. writing in Khotanese and Upright Gupta. Purport not determined. No. 63, Hoernle Reg. 7″ × 2¾″.

F. III. ii. 001. Wooden tablet, practically complete, but broken into numerous pieces and somewhat rotten; inscr., apparently on one side only, with 3 ll. faded and nearly illegible writing in Upright Gupta and apparently in Khotanese. No. 65, Hoernle Reg. 1′ 3″ × 3″.

F. III. i. 001. Pōthī. Fr. of fol., inscr. with remains of 3 ll. writing in Sanskrit and Upright Gupta; much damaged; purport not determined. No. 64, Hoernle Reg. 1½″ sq.

F. X. 1. Pōthī. Fr. of small fol., L. end up to string-hole of prob. initial fol.; inscr. with remains of 5 ll. in Sanskrit and Upright Gupta. Perhaps a *dhāraṇī*. No. 66, Hoernle Reg. 1¾″ × 1⅞″.

F. XII. 1. Pōthī fol., complete, slightly damaged, consisting of two pieces joined; inscr. with 9 ll. in Sanskrit and Upright Gupta. Fol. No. on obv., but illegible. Belongs to Pōthī of the *Suvarṇaprabhāsottama-stotra*, of which it might be the final fol. No. 67, Hoernle Reg. 1′ 3¾″ × 4⅝″.

F. XII. 2. Pōthī. Three frs. of fol., one large, two small; prob. belonging to each other; inscr. with 9 ll., in Sanskrit and Upright Gupta, of some Buddhist canonical work.

The large fr., L. side, contains end of 10th chap. (*parivarjto nāma daśamaḥ samāptaḥ*), but the name itself is broken away; 11th chap. commences *namas tasya bhagavato Ratnakusuma-guṇa* (remainder lost). No. 68, Hoernle Reg. Gr. fr. 9¼″ × 4⅝″.

F. XII. 3. Pōthī. Fr. of fol. with 9 ll., in Sanskrit and Upright Gupta, of some Buddhist canonical work (*Saddharma-puṇḍarīka?*).

The writing has some peculiarities: Akṣaras *ma* and *a* of a rather early type; *bha* in *bhagavat* always written *ba*, etc. A fr. with the same peculiarities in F. XII. 9 (No. 75). No. 69, Hoernle Reg. 4½″ × 4″.

F. XII. 4. Pōthī. Six frs. of small fols., triangular-shaped, sticking together; inscr. with remains of 2 ll. in Sanskrit and Upright Gupta chars. Purport not determinable. No. 70, Hoernle Reg. 1¼″ × 1½″.

F. XII. 5. Pōthī. Strip of fol., inscr. with 3 ll., in Sanskrit and Upright Gupta chars., of some Buddhist canonical work. No. 71, Hoernle Reg. 6″ × 1½″.

F. XII. 6. Pōthī. Six frs. of the *Suvarṇaprabhāsa*; 4 larger, 2 minute, in Sanskrit and Upright Gupta. They measure about 4¾″ in breadth and 5½″, 2¾″, 3″, 1¾″ in length, with 10 ll. on the page. One bears the fol. No. 47; another has the end of 13th chap. and the verse No. 73; another (the largest) has the end of the 15th chap.; another (apparently of the 11th chap.) has twice the mutilated name [*Suvarṇaprabhāso*]*ttamasya sūtrendra-rāja*[*sya*]. No. 72, Hoernle Reg.

F. XII. 7. Pōthī. 35 fols. of *Saddharma-puṇḍarīka*, in Sanskrit and Upright Gupta. 33 fols., numbered 5–37 complete; fols. 38 and 39 very considerably damaged; writing on all fols., especially near string-holes, often badly damaged. Fol. Nos. in L. upper corner of obv.

The text on fol. 5 a^{i} commences in the 11th chap. with *te ca sarvasattvā* on p. 247, l. 6, of Kern's printed ed., and it ends on fol. 37 b^{viii} with *bodhim abhisaṃbuddhā* on p. 316, l. 4, of Kern's printed text. But the text differs considerably in places from the printed ed. Specimens of the former have been published by Prof. de la Vallée Poussin in *J.R.A.S.*, 1911, pp. 1067 ff.

The paper appears to consist of two very thin sheets, coarse, dun-coloured, pasted together; 8 ll. writing on each page. No. 73, Hoernle Reg. Pl. CXLIV.

F. XII. 8. Pōthī. Four small frs., from upper right-hand corner of fairly large fol.; with remains of 3 ll., in Sanskrit and Upright Gupta, of some Buddhist canonical work. Also a minute fr. of another fol., showing part of string-hole and surrounding circle, but no writing. No. 74, Hoernle Reg. 5″ × 2″.

F. XII. 9. Pōthī. Three frs. of two fols., in Sanskrit and Upright Gupta, of Buddhist canonical works. A large fr., 4½″ × 4¼″, from L. side of a fol., but fol. No. missing; apparently belongs to *Saddharma-puṇḍarīka*, and is written with all peculiarities of the frs. of F. XII. 3 (No. 69), e.g. *bagavān*.

Two very small frs., 2¼″ × 1″ and 1″ × 1¾″, are written in different hand, and belong to a fol. of a different Pōthī. No. 75, Hoernle Reg.

K.Y. i. 1. Wooden cover of Pōthī; very light wood, with string-hole at 3¾″ from L. end. Prob. the upper board, because it is inscr. with *siddhaṁ a ā i*, being the beginning of the alphabetic table, in Upright Gupta chars. No. 531, Hoernle Reg. 9½″ × 1⅞″.

VI.—REMAINS OF PŌTHĪS AND DOCUMENTS, MAINLY IN KHOTANESE, FROM RUINED FORT ON MAZĀR-TĀGH

(See above, p. 1289.)

M. Tagh. ii. 004. Wooden tablet, small fr.; inscr. with remains of alphabetic and numeric radicals. No. 89, Hoernle Reg. 2½″ × 1¼″.

M. Tagh. iv. 001. Fr. of wooden tablet, with hole at R. end for suspension; inscr. on one side only with one l. writing in Khotanese and Cursive Gupta. No. 90, Hoernle Reg. 3⅞″ × ⅝″.

M. Tagh. a. 8. Strip from middle of document on coarse paper, bearing on obv. remains of 2 ll. of Cursive Gupta in Khotanese language. Rev. blank. No. 91, Hoernle Reg. 7″ × 1″.

M. Tagh. a. I. 0033. Document on coarse buff paper, complete, but damaged by holes in middle; inscr. on obv. with 13 ll. Cursive Gupta in Khotanese. Purport perhaps medical.

On last l. the date, *māñiji māśle 16mye haḍai*, i.e. 'in the month Māñija, on the 16th day', followed by signature. Rev. blank. No. 92, Hoernle Reg. $14\frac{1}{4}'' \times 10\frac{3}{4}''$. Pl. CLI.

M. Tagh. a. I. 0034. Fr. from bottom of document on thin whitish paper, inscr. on obv. with portion of date and signatory scrawl. Rev. blank. No. 93, Hoernle Reg. $3\frac{1}{2}'' \times 2''$.

M. Tagh. a. I. 0035. Fr. of document on very coarse thin brownish paper, inscr. on both sides with (apparently) a series of names, signatory to a record, of which only a portion of the conclusion is extant. The whole in Khotanese and Cursive Gupta. No. 94, Hoernle Reg. $11'' \times 10\frac{1}{2}''$.

M. Tagh. a. I. 0036. Fr. from top of document on very thin damaged paper, inscr. on obv. with 4 ll. mutilated writing in Khotanese and Cursive Gupta, beginning with partially legible date. Rev. blank. No. 95, Hoernle Reg. $4\frac{1}{2}'' \times 10\frac{3}{4}''$. Pl. CLI.

M. Tagh. a I. 0037. Fr. of document on coarse thin buff paper, covered on obv. with portions of 7 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 96, Hoernle Reg. $4\frac{1}{2}'' \times 6''$.

M. Tagh. a. I. 0038. Fr. of document on coarse thin brownish paper, bearing on obv. remains of 3 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 97, Hoernle Reg. 2" sq.

M. Tagh. a. I. 0039. Fr. from R. side of document on coarse thin brownish paper, bearing on obv. portions of 5 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 98, Hoernle Reg. $3\frac{3}{4}'' \times 5''$.

M. Tagh. a. I. 0040. Fr. from L. side of document on coarse very thin buff paper, bearing on obv. portion of two statements, consisting of 4 and 3 ll. respectively, in Khotanese and Cursive Gupta. Rev. blank. No. 99, Hoernle Reg. $4'' \times 7''$.

M. Tagh. a. I. 0041. Fr. from R. side of document on thin buff paper, bearing on obv. remains of 4 ll. writing in Khotanese and Cursive Gupta. Large blot of ink, washed out. Rev. blank. No. 100, Hoernle Reg. $4'' \times 4\frac{1}{2}''$.

M. Tagh. a. I. 0042. Fr. of document on coarse thin buff paper, bearing on obv. remains of 5 ll. writing in Khotanese and Cursive Gupta. No. 101, Hoernle Reg. $4\frac{1}{2}'' \times 3\frac{1}{2}''$.

M. Tagh. a. I. 0043. Fr. from L. side of document on coarse thin buff paper, bearing on obv. remains of 5 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 102, Hoernle Reg. 5" sq.

M. Tagh. a. I. 0044. Document nearly complete, on coarse thin brownish paper, covered on both sides with 2 ll. rather illegible writing in Khotanese and Cursive Gupta. On first l. of obv. is distinguishable name of *āśirī-Prajñendra-bhadra*, i.e. 'Āchārya Prajñendra-bhadra'. No. 103, Hoernle Reg. $8\frac{3}{4}'' \times 2''$.

M. Tagh. a. I. 0045. Fr. from R. side of document on coarse thin buff paper, inscr. on obv. with remains of 8 ll. writing in Khotanese and Cursive Gupta; also on rev. with one l. large Tib. writing. No. 104, Hoernle Reg. $7'' \times 3''$.

M. Tagh. a. I. 0046. Fr. from L. side of document on coarse thin soiled paper, bearing on obv. remains of 3 ll. writing in Khotanese and Cursive Gupta, and on rev. remains of 9 ll. crowded writing in small Tib. chars. For another fr. apparently of same doc., see M. Tagh. b. II. 0066. No. 105, Hoernle Reg. $3\frac{1}{4}'' \times 3\frac{1}{2}''$.

M. Tagh. a. II. 0094. Fr. of document on coarse paper, badly damaged; with remains of 6 ll. in Khotanese and Cursive Gupta. Rev. blank. No. 106, Hoernle Reg. $10\frac{1}{2}'' \times 4''$.

M. Tagh. a. II. 00106. Fr. of document on thin whitish paper, bearing remains on obv. of 2 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 107, Hoernle Reg. $5'' \times 1''$.

M. Tagh. a. II. 00110. Fr. of document on coarse paper, with remains on obv. of 2 ll. writing in Khotanese and Cursive Gupta. Rev. blank. No. 108, Hoernle Reg. $2\frac{3}{8}'' \times 1\frac{5}{8}''$.

M. Tagh. a. II. 00112. Fr. of document on thin coarse paper, much torn; with remains on obv. of one l. writing in Khotanese and Cursive Gupta. Rev. blank. No. 109, Hoernle Reg. $7'' \times 2\frac{1}{2}''$.

M. Tagh. a. II. 00117. Fr. of document, with remains on obv. (only 2 Akṣaras) of one l. writing in Cursive Gupta and Khotanese. Rev. blank. No. 110, Hoernle Reg. $2\frac{1}{2}'' \times \frac{1}{2}''$.

M. Tagh. a. III. 0080. Fr. of document on coarse paper, with remains on obv. (only 3 *akṣaras*) of one l. writing in Cursive Gupta and Khotanese. Rev. blank. No. 111, Hoernle Reg. $1\frac{1}{2}'' \times 1\frac{3}{4}''$.

M. Tagh. a. III. 0084. Fr. of document, paper, with remains on obv. (5 *akṣaras*) of one l. writing in Cursive Gupta and Khotanese. Rev. blank. No. 112, Hoernle Reg. $3'' \times 1\frac{1}{4}''$.

M. Tagh. a. IV. 00157. Fr. of document on coarse damaged paper, inscr. on obv. with 4 (apparently complete) ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 113, Hoernle Reg. $4\frac{3}{4}'' \times 4\frac{1}{2}''$.

M. Tagh. a. IV. 00162. Fr. of document on coarse paper, with remains on obv. (6 *akṣaras*) of one l. writing in Cursive Gupta and Khotanese. Rev. blank. No. 114, Hoernle Reg. $2\frac{3}{4}'' \times 1\frac{1}{2}''$.

M. Tagh. a. IV. 00163. Strip from bottom of paper document, with remains on obv. of one l. writing in Cursive Gupta and Khotanese. Rev., traces of writing. No. 115, Hoernle Reg. $11'' \times \frac{1}{2}''$.

M. Tagh. a. IV. 00165. Fr. of document on coarse paper, bearing on either side remains of 2 ll. writing in Cursive Gupta and Khotanese. No. 116, Hoernle Reg. $1\frac{1}{2}'' \times 2\frac{1}{4}''$.

M. Tagh. a. IV. 00166. Fr. of document on coarse paper, bearing remains and traces of 5 ll. writing, apparently in Sogdian script and language. No. 117, Hoernle Reg. $7\frac{1}{4}'' \times 3''$.

M. Tagh. a. IV. 00167. Fr. of document, paper, bearing remains on obv. of 3 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 118, Hoernle Reg. $3\frac{1}{4}'' \times 2\frac{1}{2}''$.

M. Tagh. a. IV. 00168. Fr. of document on coarse thin whitish paper, inscr. on obv. with 6 or 8 very disorderly

ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 119, Hoernle Reg. $6\frac{1}{2}'' \times 4\frac{1}{2}''$.

M. Tagh. a. iv. 00169. Fr. from R. side of document on coarse thin buff paper, inscr. on obv. with remains of 4 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 120, Hoernle Reg. 3″ sq.

M. Tagh. a. iv. 00170. Fr. from middle of document on very thin whitish paper, bearing on obv. remains of large writing in Cursive Gupta and Khotanese. Rev. blank. No. 121, Hoernle Reg. $10\frac{1}{2}'' \times 4\frac{1}{2}''$.

M. Tagh. a. v. 0026. Larger portion of document on coarse buff paper, upper L. corner torn off; bearing on obv. 6 ll. writing in Cursive Gupta and Khotanese, ending with date *Jere 10mye haḍai*, i. e. 'in the (month) Jera, on the 10th day', and with large signatory scrawl. Rev. blank. No. 122, Hoernle Reg. $11'' \times 7''$.

M. Tagh. a. v. 0027. Fr. from upper L. corner of document, possibly part of torn-off piece of the preceding; bearing remains or traces on obv. of 3 or 4 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 123, Hoernle Reg. 3″ sq.

M. Tagh. a. vi. 0081. c. Fr. of document on soft buff paper, with remains on obv. of a few Cursive Gupta letters in Khotanese. Rev. blank. No. 124, Hoernle Reg.

M. Tagh. a. vi. 0083. Upper portion of document on coarse thin paper, covered on obv. with 5 ll. rather faded writing in Cursive Gupta and Khotanese. Rev. blank. Two large holes. No. 125, Hoernle Reg. $10\frac{3}{4}'' \times 6''$.

M. Tagh. a. vi. 0084. Fr. from L. upper side of document on coarse thin buff paper, bearing on obv. remains of 7 ll. writing in Cursive Gupta and Khotanese; on rev. of 2 ll. similar writing containing a date *Kaji māśti . . . 26mye* (*haḍai*), i.e. 'in the month Kaja, on the 26th (day)'. No. 126, Hoernle Reg. $6\frac{3}{4}'' \times 5\frac{1}{2}''$.

M. Tagh. b. i. 00105. Fr. of document, paper, with (apparent) date on obv., in Cursive Gupta and Khotanese. Rev. blank. No. 127, Hoernle Reg. $5\frac{1}{2}'' \times 1\frac{1}{2}''-\frac{1}{2}''$.

M. Tagh. b. i. 00114. Fr. from middle of roll (?) on buff paper, with remains of 2 ll. very large writing, containing portion of series of numeral radicals. No. 128, Hoernle Reg. $3\frac{3}{4}'' \times 3''$.

M. Tagh. b. i. 00122. Fr. of document on soft felt-like paper, with faded remains of 5 ll. in Khotanese and Cursive Gupta. Rev. blank. No. 129, Hoernle Reg. $2'' \times 3\frac{1}{2}''$.

M. Tagh. b. i. 00125. a–e. Five frs. from four documents on paper, written in Cursive Gupta and Khotanese; largest fr. $6'' \times 3\frac{1}{2}''$. No. 130, Hoernle Reg.

M. Tagh. b. ii. 0057. Fr. of document, paper, with remains on obv. of 2 ll. in Cursive Gupta and Khotanese. Rev. blank. No. 131, Hoernle Reg. $2\frac{1}{2}'' \times 2\frac{1}{4}''$.

M. Tagh. b. ii. 0061. Fr. of document, paper, damaged, dirty, with remains on each side of three badly legible ll. writing in Cursive Gupta and Khotanese. No. 132, Hoernle Reg. $4'' \times 2\frac{1}{2}''$.

M. Tagh. b. ii. 0063. b. Two frs. of document on flimsy paper, with remains on both sides of 2 ll. writing in Cursive Gupta and Khotanese. No. 133, Hoernle Reg. $2'' \times 1\frac{1}{2}''$.

M. Tagh. b. ii. 0064. Fr. of document on coarse paper, with remains on obv. of one l. writing in Cursive Gupta and Khotanese, containing a mutilated date. Rev. blank. No. 134, Hoernle Reg. $7\frac{1}{4}'' \times 1\frac{3}{4}''$.

M. Tagh. b. ii. 0065. Complete document on oblong strip of coarse thin buff paper; inscr. on obv. with 5 ll. Cursive Gupta in Khotanese; consisting of five verses not identified. Rev. blank. No. 135, Hoernle Reg. $4\frac{1}{2}'' \times 11''$. Pl. CLI.

M. Tagh. b. ii. 0066. Fr. from middle of document on coarse stiff buff paper, very dirty, bearing on obv. 3 ll. writing in Cursive Gupta and Khotanese, and on rev. 7 ll. crowded small Tib. writing. The whole closely resembles M. Tagh. a. i. 0046, and possibly belongs to same document. No. 136, Hoernle Reg. $8'' \times 3''$.

M. Tagh. b. ii. 0067. Two frs. of document on coarse stiff dirty paper, bearing on obv. remains of 3 ll. rather faded writing in Cursive Gupta and Khotanese. Rev. blank. No. 137, Hoernle Reg. $8'' \times 4''$.

M. Tagh. b. ii. 0068. a–b. Two small frs. of Pōthī; stiff, buff paper; with remains of 2 or 3 ll. black ink writing in calligraphic Upright Gupta and Khotanese.

Contents: some Buddhist religious text, not identified. No. 138, Hoernle Reg. $1\frac{5}{8}''$ sq. and $1\frac{5}{8}'' \times 1\frac{1}{8}''$.

M. Tagh. b. ii. 0068. Two frs. from L. upper corner of document on coarse discoloured paper, with portions of 3 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 138, Hoernle Reg. $5'' \times 5\frac{1}{2}''$.

M. Tagh. c. 0013. Fr. from L. side of document on hard stiff buff paper, bearing on obv. 6 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 139, Hoernle Reg. $5\frac{1}{2}'' \times 7''$.

M. Tagh. c. 0014. Fr. from R. side of document on stiff buff paper, with portions on obv. of 6 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 140, Hoernle Reg. $4'' \times 5\frac{1}{2}''$.

M. Tagh. c. 0015. Fr. of document on stiff buff paper, inscr. on obv. with 2 complete ll. between traces of others, above and below, of Cursive Gupta in Khotanese. Rev. blank. No. 141, Hoernle Reg. $7\frac{1}{2}'' \times 2''$.

M. Tagh. c. 0016. Fr. from top of document on stiff buff paper, with portions on obv. of rather faded writing in Cursive Gupta and Khotanese. Rev. blank. No. 142, Hoernle Reg. $8\frac{1}{2}'' \times 3\frac{1}{2}''$.

M. Tagh. c. 0017. Fr. from top of document on stiff thin buff paper, with 1 complete and 4 mutilated ll. rather faded writing in Cursive Gupta and Khotanese. Rev. blank. No. 143, Hoernle Reg. $3\frac{1}{2}'' \times 11''$.

M. Tagh. c. 0018. Fr. of document on thin hard discoloured paper, inscr. on obv. with 2 ll. writing in Cursive Gupta and Khotanese, beginning with imperfectly legible date. No. 144, Hoernle Reg. $2'' \times 11''$. Pl. CLI.

M. Tagh. c. 0019. Fr. from L. side of document on thin stiff buff paper, with portions on obv. of 7 ll. good

writing in Cursive Gupta and Khotanese. Rev. blank. No. 145, Hoernle Reg. $6\frac{1}{2}''$ sq.

M. Tagh. c. 0020. Fr. of document on stiff hard paper, inscr. on obv. with 4 mutilated ll. writing in Cursive Gupta and Khotanese; on rev. with 5 ll. mutilated Tib. writing. No. 146, Hoernle Reg. $3''–2\frac{1}{2}'' \times 11''$. Pl. CLI.

M. Tagh. c. 0021. Fr. from R. upper corner of document on dirty stiff buff paper, inscr. on obv. with 5 mutilated ll. badly legible writing in Cursive Gupta and Khotanese, and on rev. with 3 mutilated ll. Tib. writing. No. 147, Hoernle Reg. $6''$ sq.

M. Tagh. c. 0022. Fr. from R. upper corner of document on stiff thin buff paper, inscr. on obv. with portions of 5 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 148, Hoernle Reg. $5\frac{1}{2}''$ sq.

M. Tagh. c. 0023. Two frs. of document on dirty stiff buff paper, inscr. on obv. with remains of 8 ll. writing in Cursive Gupta and Khotanese. Rev. blank. Much damaged. No. 149, Hoernle Reg. Gr. M. $6\frac{1}{2}'' \times 4''$.

M. Tagh. c. 0024. Fr. of document on thin whitish paper, inscr. on obv. with remains or traces of 2–3 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 150, Hoernle Reg. $6'' \times 2\frac{1}{2}''$.

M. Tagh. c. 0025. Fr. from top of document on thin whitish paper, inscr. on obv. with one l. fine black writing in Cursive Gupta and Khotanese. Rev. blank. No. 151, Hoernle Reg. $6\frac{1}{2}'' \times 1\frac{1}{4}''$.

M. Tagh. c. 0026. Fr. from L. upper corner of document on stiff buff paper, with slight traces of one l. writing in Cursive Gupta and Khotanese. Rev. blank. Much damaged. No. 152, Hoernle Reg. $5\frac{1}{4}'' \times 1''$.

M. Tagh. c. i. 0064. Fr. of document, paper, with faded remains of 3 ll. writing on both sides in Cursive Gupta and Khotanese. No. 153, Hoernle Reg.

M. Tagh. c. i. 0074. Five frs. of documents on very coarse flimsy paper, bearing on obv. from 1 to 5 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 154, Hoernle Reg. Gr. M. $4\frac{1}{2}'' \times 2''$.

M. Tagh. c. ii. 0066. Fr. of document on soft thin dun-coloured paper, with remains on obv. of 6 ll. good writing in Cursive Gupta and Khotanese. Rev. blank. No. 155, Hoernle Reg. $4\frac{1}{2}'' \times 4\frac{1}{4}''$.

M. Tagh. c. ii. 0068. Fr. of document on flimsy dirty paper, with rather illegible remains on obv. of 2 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 156, Hoernle Reg. $6\frac{1}{2}'' \times 3\frac{1}{4}''$.

M. Tagh. c. iii. 0079. Fr. of document on thin whitish paper, with remains on obv. of 3 ll. writing in Cursive Gupta and Khotanese. No. 157, Hoernle Reg. $4'' \times 2''$.

M. Tagh. c. iii. 0081. Strip from top of paper document, bearing on obv. remains of 2 ll. writing in Khotanese, which begin in Upright Gupta, but change to Cursive Gupta in second l. On rev. indistinct traces of writing in Cursive Gupta. No. 158, Hoernle Reg. $4'' \times \frac{5}{8}''$.

M. Tagh. c. iii. 0083. Fr. of document on thin coarse paper, bearing on obv. remains of 3 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 159, Hoernle Reg. $1\frac{1}{4}'' \times 3''$.

M. Tagh. c. iii. 0094. b. Three minute frs. of document on coarse paper, with remains on obv. of 2 or 3 ll. writing in Cursive Gupta and Khotanese. Rev. blank. No. 160, Hoernle Reg.

APPENDIX G

NOTES ON SIR AUREL STEIN'S COLLECTION OF TIBETAN DOCUMENTS FROM CHINESE TURKESTAN

BY THE

REV. A. H. FRANCKE, Ph.D.

[Extracted from Dr. Francke's paper published in the *Journal of the Royal Asiatic Society*, 1914, pp. 37–59; see above, pp. 467 sq. Notes and references added are shown within brackets.— A. Stein.]

This collection of ancient Tibetan documents, of which I have been engaged in preparing an inventory under an arrangement sanctioned by the India Office, contains close on two thousand pieces, none of them probably of a later date than the ninth century A.D., and is certain to shed a flood of new light on Tibetan archaeology, history, grammar, culture, religion, and folklore. Most of the documents were found at two sites, viz. Mīrān and Mazārtāgh. . . .

The documents were in both localities found scattered among the abundant deposits of refuse resulting from prolonged occupation by a Tibetan garrison. In part they may represent the last remains of ancient archives. That the Tibetans of the seventh and eighth centuries kept archives is made probable by the word *yig-dkar-cag* 'register of letters', which occurs in the documents. The word 'register of debts' is also found in one of the documents.

Although many of the documents, especially the wooden ones, are in good preservation, the number of those which contain a fuller connected text is rather small. Of most of the documents on paper one-half only has been preserved. As Dr. Barnett, of the British Museum, observes, this fact reminds one of a custom in ancient Europe, according to which tallies were cut in two and each party received one half of the stick. Most of the wooden documents are labels containing addresses. These labels were probably tied to the various packages on transport of provisions or other articles. Other short wooden documents which were apparently used by tax-collectors on their journeys to the taxpayers are of a similar character, viz. they do not contain much besides personal and local names. All these documents, however, yield a very rich harvest of ancient Tibetan names, local as well as personal, and it will take us a long time before all the local names have been identified or all the personal names have been properly grouped. In a number of cases, of course, we cannot yet decide whether a now unknown name is of local or personal character.

At first sight the names give the impression that Tibet must have undergone great changes since the time when they were recorded. The Tibetan names of the present day are mostly Buddhist, and may in almost every case be understood at first sight as regards their meaning. It is surprising to find that a great number of the names contained in the Stein Collection do not show their significance so readily. They consist partly of syllables which have been lost to the Tibetan language during the last twelve hundred years. . . .

Although not a single royal name has as yet been found among the names of the Stein Collection,[1] several

[1] *Mu-khri* occurs as a minister's name.

of the names are of historical interest, as they agree with ministers' names given in the old stone-edicts of lHasa. (See Lieut.-Col. Waddell's edition in the *J.R.A.S.*, 1910–11.) Thus the names of the famous ministers *rJe-blas* and *sTag-sgra*, of the Potala inscription of A.D. 730, are repeatedly mentioned on documents of the Stein Collection. The same may be said with regard to the ministers *Khri-bzher* and *sTag-bzher* of the Potala inscription of A.D. 764, and several names of ministers occurring in the inscription of A.D. 783. As regards the names on the stone-edicts, they are generally compounds of personal names and clan-names. The Stein documents, on the other hand, generally give only the personal names, at any rate in all those cases when a famous and well-known minister is addressed. For this reason the identification of the names found in the Stein Collection and on the stone pillars at lHasa cannot yet be called perfect, but it is quite probable that both authorities treat of the same personages.

Although royal names are not found in the documents of the Stein Collection, several of them seem to refer to kings, either of the whole of Tibet or of vassal states. The wish 'May your helmet remain firm!' was addressed to royalty in those days as well as in quite recent times.

As regards the religious side of the question, a good number of the names are of Bonpo character. I may mention the names which contain the word *lha*, god (of the pre-Buddhist pantheon), and *Klu* (Nāga), *gSas*, *Khro*, as one of their compound parts. The principal part of the name of the founder of the Bon religion, viz. *gShen-rab*, is found in several personal names; for instance, in *gShend-sum-bu*, *sKu-gshen*, *gShen-phan-legs*, etc. A few names remind us also of names occurring in the Kesar-saga, the old epic of Tibet. . . .

Names of women are extremely rare in the documents. *rGya-mo* is the name of a female slave; *mNā-ma* occurs once as the writer of a letter, but the word means 'daughter-in-law'.

Buddhist names are also of rare occurrence. On entering a monastery a man received a new Buddhist name. Thus we read that a man who was formerly called *'U-tung-gsas-chung* received the name *Byang-chub-bkra-shis* when he entered a monastery. Other Buddhist names are: *gZhon-nu-dpal-grub*, *sPyan-ras* (probably), *Byang-chub*, *Yon-tan-seng-ge*, *dGe-bsnyen* (Upāsaka), *Sha-ri-bu* (Śāriputra), *lHa-sbyin* (Devadatta), *rDo-rje* (Vajra), *rDo-rje-dgyangs*, *'aJam-dpal* (Mañjuśrī), *Com-ldan-'adas* (Bhagavān), *dGe-mthso*.

Several names are of interest as having been observed also in documents of Ladakh or other literature. Thus the name *gYu-sgra* is found in the Stein Collection, and the same name is also given in the *bTsun-mo-bkai-thang-yig*, which professes to date from Padmasambhava's time, edited by Dr. B. Laufer. The syllables *sMer-zhang* form part of one of the names in the Stein Collection, and several names containing the same syllables are found on the boulders near the bridge of Khalatse.[2] . . .

In many cases the personal names are found in connexion with titles. The most ordinary title of the documents is perhaps that of a minister, or *blon-po*, abridged *blon*. There are, however, various kinds of ministers, as, for instance, *rJe-blon*, a high minister; *The-blon*, minister of seals; *dGra-blon*, minister of enemies, probably 'minister of war'; *So-blon*, minister of guards; *Khri-blon*, throne-minister; *Phyi-blon*, minister of outward affairs; and *Zhang-blon*, uncle minister. . . .

Other titles are: *Nang-rje-po*, the great man of the inside, which I have usually translated by 'Minister of Inner Affairs'; *Kha-ga* (modern *Ga-ga*), nobleman; *Jo-cho* or *Jo-co* (modern *Jo-bo*), lord. I may note that in modern West-Tibetan the form *Jo-jo* is generally used for noble ladies, but in the Stein Collection the title *Jo-co* seems to refer to men; *rTse-rje*, high summit (the sphere of work of this official has not yet become plain, perhaps he was a magistrate); *Yi-ge-pa*, secretary; *sPyii-yi-ge-pa*, general secretary; *gNyer*, steward; *sDe-po*, head of a tribe; *mKhar-pa*, head of a castle; *Khams-kyi-dbang-po* seems to have been the title of the *major domus* who played such an important part in old Tibet. This title is given to *Blon-rgyal gSum-bzher*, the royal minister *gSum-bzher*.

Another group of titles consists of compounds with the word *dpon*, master. The following kinds of *dpon* have been noticed in the Stein Collection: *Ru-dpon*, perhaps 'master of a clan' (*rus*); *'Og-dpon*, lower officer, subaltern officer; *Zhing-dpon*, master of the fields (this title is still used nowadays: a *Zhing-dpon* is the man who has to regulate the irrigation of the fields); *sTong-dpon*, master of thousands, colonel; *dMag-dpon*, army officer; *dPhung-dpon*, master of the host; *Chibs-dpon*, master of the horse; *Khral-dpon*, tax-officer; *dNgos-dpon*, perhaps 'frontier officer'; the title *Thsugs-dpon* cannot yet be exactly explained; it may be the title of a magistrate. Also the title *Khong-ta* cannot yet be translated. . . .

[2] Francke, 'Historische Dokumente von Khalatse': *Z.D.M.G.*, Bd. lxi, pp. 583 sqq.

As regards local names, we find a great number of them. The greater part seem to refer to districts or settlements in Turkestan and Tibet. Other countries do not seem to be referred to so often. The word *rgya*, in connexion with weights, may refer to India as well as China. We read of *Bod-bre* and *rGya-bre* in the documents. Whilst the word *Bod-bre* certainly refers to Tibetan weights, we do not yet know whether *rGya-bre* means 'weights of China' (*rGya-nag*) or 'weights of India' (*rGya-gar*). Other foreign countries mentioned in the documents are the following: *Hirad* may be Herat in Persia; *sNa-nam* is the name of Samarkand, according to Jäschke; *Sog-po* would refer to Mongolia; *Ho-peng* may be in China; *Mon* is the Tibetan name of the Himalayan districts of India. The latter name is found in several personal names, as, for instance, *Mon-chung*, *Mon-khyi-gu-chung*.

Looking at names referring to Turkestan, the most important identification has been that by Dr. Stein of *Nob* with *Lob* or *Lop*. He says in his letter of October 19, 1910: '*Nob-chen*, "Great Nob", was probably the name of the Tibetan station at Mīrān. Topographical and archaeological reasons compel me to believe that *Nob* is the Tibetan attempt at reproducing an ancient local name. The same name is spelt *Na-fu-po* by Hsüan-tsang, while Marco Polo writes *Lop*. *Nob-chung*, "Little Nob", may be identical with Charkhlik (about fifty miles W.S.W. of Mīrān).'[4] . . . Let me add that still another name referring to *Nob* is found in the documents; it is the name *Nob-shod*, or 'Lower Nob'. 'Three castles of Nob' are occasionally mentioned, and the name of a castle situated in Little Nob was *Nob-chung-ngu-gYung-drung-rtse*.

Another local name which may be connected with Turkestan is *Li*. According to the dictionaries, *Li* is the Tibetan name of Khotan. I suppose that in the documents it refers to a larger tract of country. This name is not often found singly; in most cases we find it connected with other, probably often personal names. Such compound names are: *Li-snang*, *Li-mngan*, *Li-bu-god*, *Li-gos-de*, *Li-shir-de*, *Li-hir-bod*, *Li-gchig-chad*, *Li-rje*, *Li-sa-bdad*. The Tibetan name *Hor*, for Turkestan, is also found in the Stein Collection.

Tibetan local names which have become known from Tibetan geography occur also among the documents. The following may be mentioned: *rGod-tsang*, *lHo-brag*, *Nag-shod*, *Khams*, *'aBrom*, *dBus*, *Chog-ro*, *Bu-srang-gi-sde* (perhaps identical with *Bu-hrangs*, modern Purang), *Nang-gong* (Baltistan), *sTong-sde* (perhaps in Zangs-dkar), *Gle* (very probably the capital of Ladakh, Leh—in the old chapters of the chronicles the spelling *Gle* as well as *Sle* is used for Leh). *mNgaris* seems to be used as a name of the western parts of Tibet. In the old parts of the chronicles it is used as a name of the West Tibetan Empire. *Byang-po* is the name of the *lHa-sa* district. *'A-zha*, a name found often in the Padmasambhava literature, is supposed to be identical with the present *Gar-zha* or *Ga-zha*, Lahul. In the Stein documents *'A-zha* is once called *rGya-la-gtogs-pa*, belonging to *rGya*. The village of *rGya* seems to have been the capital of Western Tibet (*rGya-sde*) in ancient times. . . .

Fairly often local and personal names are found combined, and experience has shown me that in such cases the first name is always the local, and the second the personal name. The first local name is to be taken as the birth-place of the person mentioned thereafter. *Lang-myi-sde-zhims-stag* means '*Zhims-stag* of the province of *Lang-myi*'. *'A-zha-yang-bre* means '*Yang-bre* of *'A-zha*'.

Lakes and rivers do not often seem to be mentioned. I have noticed the following: *mKhar-'athso* probably stands for *mKhar-mthso*, lake of the castle; *Mye-long*, mirror, is apparently the name of a lake, also *sPrul-gyi-mye-long*, enchanting mirror; *Khyung-byi-tsa-mthso-gong* means 'upper lake of *Khyung-byi-tsa*'. The expression *Sho-rtsang-'agram-du* means 'on the shore (bank) of *Sho-rtsang*'.

The documents of the Stein Collection contain a great number of dates. Although they generally give the numbers of days and months and the name of the year, they are not of much use to the historian, for the names of the year invariably refer to the cycle of twelve years only. All the same, the documents furnish us with material to prove the veracity of the Tibetan (Ladakhi) chronicles, where we find a statement to the effect that the Chinese calendar was introduced into Tibet under *Srong-btsan-sgam-po* (seventh century). The cycle of twelve years was apparently all that became known to the Tibetans of those days, and we cannot help feeling suspicious when a Tibetan chronicle, in describing the times between A.D. 600 and 1000, makes use of the cycle of sixty years. This is the case in particular in the chronicles of Central Tibet, whilst the chronicles of Ladakh use the twelve years' cycle down to the fifteenth century. It is well known that the dates of reigns given in the sixty years' cycles of Central Tibetan chronicles are not in agreement with the dates given by Chinese historians

[4] [For a rectification of this view, which was formed at a time when the materials available were not complete, see now above, pp. 468 sq.—STEIN.]

for the corresponding reigns. Nobody would ever doubt the accuracy of the Chinese statements. Thus we are driven to believe that the dates in the sixty years' cycle, referring to early times and given in Central Tibetan chronicles, are fabrications of a later time, when the sixty years' cycle had become known in Tibet. The Ladakhi chronicles, which are free from such erroneous dates, may be far more reliable works than the Central Tibetan works.

The Tibetans of those times had a system of twelve months, which were called after the four seasons: *dpyid*, spring; *dbyar*, summer; *ston*, autumn; and *dgun*, winter. Each season had three months, called the first, the middle one, and the last. . . .

How many days each of these months was given we do not yet know.

There are a few passages in the documents which seem to point to a different, perhaps more ancient, calendar, as follows: *gYui-lo*, turquoise-year; *gShol-'abor-bai-sla*, month of putting aside the plough; *'aTron-kong-gi-sla*, month of diligence; *sKyald-gyi-sla*, month of sending.

Among the complete documents we find a great number which apparently originated with tax-collectors. They are of two styles. One of them consists of tablets of a length of about 30–40 cm., square in section. They show notches at their edges, evidently intended to mark the number of bushels of grain contributed by various taxpayers. In writing, we find such words as 'barley', 'wheat', 'millet', 'grass', 'horse-fodder', written close to the notches, whilst the names of peasants and notes regarding their payments are found at the other end of the tablet. The other kind of tax-collector's documents consists of short wooden tablets, coloured red on the surface. The right lower corner is generally cut out purposely, apparently to mark them specially. They also show notches and short notes in writing, like the other kind of documents. Thus we read: 'Six *bre* of barley were not received', and then 'Received later on', or 'Four *bre* of barley were received afterwards'. Sometimes we find the two words, *bab*, taxes, and *thar*, free, and nothing else, on the same piece of wood. Then we may suppose that the person who held the document was free from taxes.

There is another kind of document, marked by a broad stroke of red colour, running round the middle. I have not yet been able to discover what these may have in common. To say that they are messages from Government would not mean much, considering that most of the documents are of an official character. On one of these documents the red stroke was apparently painted with blood.

As regards the general character of the contents of the better-preserved documents on paper and wood, we find there lawsuits, inventories, distribution-lists of provisions or presents, demands for military assistance or for more provisions, arrangements for the service of the guards or sentinels, complaints that wages or rewards were not given, reports of illness, prayers for medicine, accounts of debts, appointments to some post, lists of transports of arms, etc. In the latter lists we read of shields, bows and arrows, arrow-blades, arrow-flags, helmets, swords, coats of arms. There are a few documents which contain something like records of battles. These notes are, however, not of much use to the historian, as they are very meagre, and cannot be dated. A note like 'The *Rong-lings* country was seized' does not help us at all at the present stage of Tibetan historical research. An interesting lawsuit is that about the sale of a slave called *rGyal-phu-tsab* [see M. I. xliv. 7]. The price amounted to eight weights of *dMar* (= *dmar-gro*, red wheat?). In case the slave should run away, the former owner was bound to provide another servant (slave) of the same capacity. Underneath this document, as well as underneath many others, the names or the seals of the forty-four chief witnesses (*dpang-rgya*) are given. These forty-four formed a court of witnesses, and it is of interest that the number forty-four is also found as that of certain officials in the account of *gNya-khri-btsan-po*, in the Ladakhi chronicles.

A considerable number of documents refer to the *so-pa* (watch, spy, sentinel), i.e. to those soldiers who had to do military service on the frontier or (probably) in unreliable districts. This service had to be done in turns, and it was not only a round of service among individuals, but among tribes. Whenever the term 'turn of service' refers to an individual, we may be sure that the same is an officer. In one document we hear of two officers, who had exchanged their turns of service and done service for one another during their respective turns.

Besides the *so-pa*, the documents mention the *'adrul-ba* (='*agrul-ba*), runners, very often. I am convinced that these 'runners' were postal runners. Ancient Tibet and Turkestan seem to have been in enjoyment of an institution similar to that of present-day India, where the post-runners still have to do a great part of the postal work. Passages like the following occur repeatedly among the documents: 'As the runners are just leaving, I take the opportunity to write you the following words.' Besides the *'adrul-ba*, the *bang-chen* or *bang-ka-pa*,

swift messengers, are occasionally mentioned. One document which speaks of a *pho-nya*, or 'messenger', is impressed with a seal showing a rider galloping. It looks almost like a stamp ensuring quick service.

Several letters are of an entirely intimate and familiar character, and there is hardly a single piece where the personal tone is altogether wanting. Inquiries after health are found continually, and joy is expressed at good news or at the expectation to see the other's 'good face' (once 'his face which looks like sun and moon') again. Good wishes for health or long life generally conclude the letters. We get the impression that many of these phrases have become conventional. There are some letters which contain nothing besides such conventional phrases. We must not forget, however, that in most of these letters we have before us the correspondence of a number of high officials who may have been closely related to one another, besides being related to the royal family. In Ladakh we know for certain that the royal family intermarried with the families of high ministers. In Ladakh the title or name *btsan*, *btsan-po*, would indicate that a certain person was descended from the royal family. I suspect that all those ministers mentioned in the documents whose names show the syllable *btsan* were related to royalty. But on the whole we get the impression that not only the high officials, but a great part of the population, knew reading and writing. A cook as well as a baker are found among the addressed persons, and peasants write letters to the court when they wish to accuse a certain person.

Special terms of civility found in the documents are the following: the writer speaks of himself as 'I, a bad one' (*bdag-ngan-pa*); he places his letter before the feet of the addressed person (*zha-sngar* seems to be an abbreviation of *zhabs-sngar*); a ruler is greeted with the wish, 'may your helmet remain firm!'

It is of interest that a number of documents contain fragments of the Tibetan alphabet. They may represent portions of copy-books used by beginners in the art of reading and writing. They are, of course, of great importance, because they belong to times not long after the alleged invention of the Tibetan alphabet by Thon-misambhota. From the fragments we learn that the old alphabet was hardly different from the alphabet of thirty letters as used nowadays. . . . Two of the documents of the Stein Collection seem to be a fragment of a syllabary. They contain repetitions of the same consonant, furnished with all four vowel-signs and the Anusvāra.

A particular class of documents seems to refer to the distribution of fields, probably after the conquest of a new district. There we find personal names or titles followed by a numeral referring to '*dor* of field'. The word *dor* is not known from other Tibetan literature, but it is evident that in the documents of the Stein Collection it is the name of a measure of area. As regards agriculture, the documents mention the following occupations: *zhing-pa* seems to be an ordinary field-labourer, *chun-pa* is the person who irrigates the fields. Ploughing of the fields and threshing of the grain is repeatedly mentioned. Punishment is announced for all who let the water dry up (*chab-rkam-bgyid-pa*). The most remarkable discovery is, however, that 'maps of the fields' (*zhing-'agod* = *zhing-bkod*) are referred to in one of the documents [cf. M. I. iv. 93].

A certain number of wooden documents are furnished with a carefully cut socket at one end of the tablet. As we know from a few better-preserved specimens, this deepening was filled with clay, and a seal was probably impressed on the latter. As regards the writing found on these documents furnished with seals, it never contains much beyond addresses. This leads me to believe that what remains now is never the complete document. The wooden boards may represent only the cover of the paper document which was originally packed between them.[5] As, however, writing-material was rare in Turkestan, the wooden documents were used several times, the old writing being scratched off to make room for a new text. Thus the documents furnished with deepenings for seals may also have been used again for less important documents, and several of them appear like ordinary labels.

Paper must have been a rather rare article, for we find it occasionally mentioned as a little present offered to the addressee, if the latter was in a high position. The custom not to approach a person in a high position without a little present was apparently in vogue in those early days. Most of the paper documents contain different letters on their two sides, and there are a few palimpsests in the collection.

Regarding measures, the following may be gathered from the documents: a *khal* is a horse-load; a *srang*

[5] Judging from the shape of these small tablets and the analogy of many Chinese documents of the Han period found along the ancient Tun-huang Limes, it seems more probable that missives of this kind were meant merely to authenticate verbal messages and orders which the person carrying the tablets was to deliver. [Cf. M. I. vii. 76.]—STEIN.

seems to be a smaller weight, but it is probably more than an ounce, as we find it described in Jäschke's Dictionary. A *bre* is a still smaller weight, four pints according to Jäschke. As stated above, there are two kinds of *bre*, the *bod-bre* and *rgya-bre*, viz. the Tibetan and the Indian (or Chinese) *bre*. Also the word *rdo-gram* seems to signify a weight. Silver was probably counted by *dbyam* or bars, whilst for gold and jewels the word *zho* (= $\frac{1}{10}$ ounce) is used. Of great interest is the following equation, found in one of the documents: $\frac{1}{2}$ *zho* of gold = 3 *zho* of silver.[6]

Among the articles forwarded in trade, or taken as taxes or as spoil of war, we find the following mentioned: kinds of grain are, *gro*, wheat; *nas*, barley; *khre* and *chi-thse*, two kinds of millet; *rta-bra-bo*, horse-buckwheat; *'abras* may stand for 'rice', although it may as well be translated by 'fruit'; *'abras-skam* would be 'dry rice' or 'dry fruit'; *rtsa*, grass or fodder, is also repeatedly mentioned. The words 'black', 'white', or 'red', in connexion with kinds of grain, may refer to black or white barley or wheat, or to red rice, etc. Favourite products of the garden were: *la-phug*, radishes; *rgun*, grapes; *kham*, dried apricots; perhaps even carrots. Products of the flocks were: *mar*, butter; *thud*, cheese; *zhun-mar*, melted butter, probably the Indian *ghi*; dried yak-meat. I may mention that great stores of 'old meat' and 'old butter' play an important part in the Kesar-saga. *sPod*, spices, were required for the preparation of dishes. *sKyems*, beverage, is probably the name of the ordinary Tibetan beer prepared of green barley. It was required for weddings and for the New Year's festival, and kept in *thul* (*skyems-thul*), leather bags. A particular kind of beer may have been the *sog-skyems*, Mongolian beer. Of fabrics we hear at least of two kinds, viz. *snam*, the ordinary woollen cloth of Tibet, and *men-thri*, a kind of cloth which has not yet been specified. *Pha-thsa* seems to stand for *phad-thsa*, coarse sackcloth. *Thsos-bal* is probably dyed wool; *gtan* are carpets, perhaps the felt-carpets of Turkestan.[7] Of mineral articles the following are mentioned: soda, copper (at any rate *zang-bu*, copper kettles), gold, silver, turquoises, pearls, corals. *rDzeu* seem to be clay-pots; but what *skyogs* are cannot yet be decided; they may be cups or ladles.

Looking at the animal world, we notice that practically all the animals mentioned in the documents are used for transport. Of horses, a particular breed, that of Amdo, is mentioned in one of the fragments. This is of particular interest, because this breed is of great fame even nowadays. Mules and donkeys were hired out, and quarrels arose about the latter. Goats, and probably sheep also, had to carry loads—in particular, wool. Camels, yaks, and oxen are not so often mentioned. It looks as if yaks, as well as horses, were occasionally used for sacrifices. As regards horses, the local name *mchibs-yon-gyi-sde*, province of the horse-sacrifice, would point in that direction. From some documents we learn that horses suffered occasionally from epidemics.

Although the documents containing Buddhist literature are not included in the collection with which my inventory deals, we get a few glimpses at the religious state of Tibet in the eighth century. Judging from personal names, Buddhism was not yet powerful at the time of the documents. Buddhist priests are mentioned occasionally, but the title *bla-ma* (with the feminine article *ma*) is never found. Titles like *rje-bla* or *sku-bla* may refer to priests, but we are not certain. The most common title used for priests is *ban-de*, but also *dge-'adun* and *btsund-pa* are found. Nuns are called *ban-de-mo* or *btsun-mo*. Other titles used for higher ranks of Buddhist priests are *mkhan-po*, abbot, and *chos-rje*, prince of religion. A Buddhist temple is called *gTsug-lag-khang*. *Theg-khang-rnying*, old house of the vehicle, seems to be the name of a monastery.

The Bonpo priests were apparently known as *Bon-po*, *lha-myi*, *mngan* (sorcerer); perhaps also as *gYon-len*, 'taking the left'. The latter name may refer to their custom to keep the honoured person or object on their left when circumambulating him or it. Also the Bonpo form of the Svastika is repeatedly found among the documents.

Although a few religious charms occur in the collection, the *ōṃ maṇi padme hūṃ* formula has not yet been discovered. *Ōṃ ā hūṃ* was apparently popular, and *vadzra paṇi phaṭ* can also be traced.

Religious ceremonies are referred to, but we do not yet know whether they were in every case performed by Buddhist or Bonpo priests. The word *sku-rim* (a religious ceremony in time of illness, practically the exorcising of the spirits in the illness) is found several times. A *sman-yon* seems to be an offering to a *sman* or evil spirit; *chab-yon* is a 'water offering'. As stated above, yaks were apparently offered according to one document, and a local name makes horse-sacrifices probable. Before starting on a journey an astrologer was apparently asked

[6] Marco Polo records exactly the same relative value of gold and silver for Western Yünnan at the close of the thirteenth century; cf. Yule, *Marco Polo*, ii. pp. 79, 95.—Stein.

[7] Carpet-weaving was an ancient art of Khotan; cf. *Ancient Khotan*, i. p. 134.—Stein.

to look out for a good day. A few documents seem to treat of religious persecution. They may refer to the struggle between the Buddhist and the Bonpo religions in the eighth century.

The title *sMan-pa* may be that of a doctor. In one of the documents a recipe is given regarding a medicine to be 'smeared on a corpse', probably to preserve it. It consists of sheep-dung boiled with a little water 'until it melts', butter, barley, etc. A few names of diseases occur, but we do not yet know what their nature was. Such names are: *yams*, *grums*, *gcong*, *'abring-nad*.

The style of the letters and secular documents is absolutely different from that of the classical language as it has become known from Buddhist religious literature. The language of the latter has practically remained stationary; for the fragments of Buddhist literature as found in the ancient sites of Turkestan show the same language as the present editions of the *bKā-'agyur* and the *bsTan-'agyur*. The language of the secular documents of the eighth century, on the other hand, is full of constructions with the auxiliary *mchis*, which is very rarely used in classical essays. From this it becomes probable that the language of Buddhist literature was already a sacred language when it was used for the first translations. It may have been the sacred language of Bonpo literature which had been handed down orally. The secular documents of the Stein Collection, on the other hand, may represent the language of daily life of the eighth century.

As regards the orthography of the documents, it is anything but settled. The nowadays silent prefixes are written or not according to the pleasure of the writer; thus we read *gzigs* or *zigs*, *dgra* or *gra*, *mchod* or *chod*, *bkā* or *kā*, *mkhar* or *k[h]ar*, etc. Aspirated tenues are continually mixed up with unaspirated ones. . . .

We must not forget, however, that most of the documents were written in a foreign country, and this circumstance may account for a great number of orthographical mistakes. But one observation may be of importance: although the prefixes are not written in a great number of cases, we hardly ever find the wrong prefixes used. In this respect the old documents differ from Tibetan letter-writing by ordinary people as we find it nowadays. . . .

There are many words the meaning of which is still quite uncertain. To mention only one instance, we do not yet know how to explain the local names *Bod*, Tibet, and *Li*, Khotan, when they are connected with numerals—*bod-gnyis*, *li-bzhi*, etc.—as is often the case. . . .

APPENDIX H

NOTES ON MUSICAL INSTRUMENTS REPRESENTED IN THE STEIN COLLECTION

BY

KATHARINE SCHLESINGER

I. MUSICAL INSTRUMENTS REPRESENTED IN PAINTINGS FROM THE 'CAVES OF THE THOUSAND BUDDHAS', TUN-HUANG

A.—Large Silk Paintings

Ch. lii. 003. Orchestra, grouped right and left. On L. of picture, commencing from the top, a drum, a harp, a lute, a psaltery, a lute; on R., large clappers, transverse flute, *cheng* or Chin. mouth-organ, pipe with whistle-head or reed, more probably the former.

Drum. In the shape of two cups reversed and joined at their bases. Over the aperture at each end is stretched a piece of vellum or skin, which is being struck with great vigour by the performer with his hands; the sound produced would be of indefinite musical pitch. (For a different use of this instrument, see below, Yo. 02. b.)

Harp. Similar to that in Ch. lv. 0011. Sound-holes are visible in the side of the sound-chest; the tension rod shows the system of ring attachment used.

Lutes. The two lutes are identical; handsomely decorated with inlay, carving, and paintings. There are four strings fastened to a bridge tail-piece, on the sound-board, at one end, and stretched over a carved and inlaid finger-board ending in a fleur-de-lis or leaf where the pear-shaped body joins the neck. The scroll peg-box has a very modern appearance, the pegs being fastened through the sides. There are two C-shaped sound-holes. A large plectrum, fan-shaped at one end, is held by the performer, who in one case seems to be giving the note, while the second performer is tuning up and fixing a peg.

Psaltery. Is of a long rectangular shape, composed of a sound-chest over which are stretched longitudinally some eight to twelve strings (eight may be discerned), supported on rows of movable bridges. Performer is using both hands to twang the strings. There are small round sound-holes in the sound-board. A similar type of instrument, if played by striking the strings with small hammers, would be called a dulcimer. The former, when provided with keyboard, gave us the harpsichord type; the latter the pianoforte.

Clappers. An instrument of this type is referred to above, p. 1051 (Ch. xlix. 005). Drawing in this case more elaborate. Shows five or perhaps six thin plates of some dark wood cut in the shape of a sail.

Transverse Flute. A cylindrical flute, apparently built with three or four joints. The embouchure is visible at the side, and the position of the lips in blowing is correctly indicated. The flute is held towards the right, the R. hand fingering the lower notes (cf. flute in Yo. 02. a).

Cheng. Chinese mouth-organ, the progenitor of our harmonium. The instrument is shaped like a teapot, filled with reed pipes of different lengths, and consists of a wind reservoir, generally a gourd, of an insufflation tube (the spout of the teapot), and of the pipes which act as resonators, reinforcing the note of the free reed inserted just above the foot of each pipe. A few dummy ones without reeds are generally inserted to add to the symmetry. The free reed consists of a flap of reed, leather, or fine thin brass, fixed over an aperture, into which it fits so that it works freely, responding to the stream of compressed air and swinging with elasticity to and fro through the aperture. The distinc-

tive feature of this principle, compared with that of beating reeds with which our reed-organs are provided, is that, given a fixed mouthpiece in both, increased wind pressure produces a dynamic variation in sound in the case of the free reed, and the next possible harmonic of the series in the case of the beating reed or single reed. Performer is shown stopping the vent-holes of the pipes which he desires to sound.

Whistle-pipe. Pipe very similar to our so-called penny whistle, an instrument considerably easier to play than the transverse flute. In the latter the player learns to compress his breath in an even stream and to direct it against the sharp edge of the embouchure; in the whistle mouthpiece this is mechanically done for him, by means of the narrow channel through which he blows.

Castanets (?). It is probable that the small figure directly above the musician with the clappers, and opposite the similar figure of the drummer, is playing the castanets.

Ch. lv. 0033. Similar orchestra to that of Ch. lii. 003 is grouped L. and R. of a dancer. On L. of picture, commencing from top, is a lute of exactly the same type, having the same structural features and ornamentation; a whistle-pipe, more roughly drawn than that in Ch. lii. 003; and clappers of the same kind. On R., at the top, a harp of same kind showing no strings, a *cheng* more roughly drawn, and a transverse flute held to the L. with the L. hand covering the lower holes. This flute is provided with a hook fixed above the embouchure, on under side, for hanging to belt.

Ch. xxxviii. 004. Orchestra grouped R. and L., consisting on L. of a *cheng* and a lute; on R. of a long psaltery and clappers; all similar to those already described. The lute, which is played by means of a vermilion plectrum, has also the head bent back at right angles in Persian style (see Ch. lii. 003; liv. 007; lv. 0033).

Ch. 0051. Musicians on R. and L. of dancer. To L. are playing a set of four clappers and a whistle-pipe; on R., a transverse flute held towards the L. and a *cheng* with large wind reservoir and comparatively short pipes (see same paintings as Ch. 0051).

Ch. liv. 007. Single musician playing upon large lute, with a very long plectrum expanding at the striking end in shape of fan. The lute, a tenor or bass, is similar to those represented on the other silks described above, except that the head is bent back at right angles in the Persian style (which increased the tension of the strings) and that there are three small bridges probably misplaced by the artist very near the end of the finger-board, and possibly used for sympathetic strings. A man at the head of the chariot is playing upon a sistrum.

B.—Silk Banners

Ch. xlix. 005. Two musicians in the upper part of picture, one playing on instrument of flageolet type, with whistle mouthpiece, oı possibly with a reed placed inside a capsule and set in vibration by the breath through a slit or opening in the top of the capsule; the second playing a set of large wooden clappers strung on a gut or thong passing through holes at the top of the clappers, which are pulled out and struck together at the base.

Ch. lv. 0011. One musician with pillarless harp, usually supported on the ground by means of a spike. The curved wooden sound-chest to the L. of the instrument serves also as string-plate, the sound-board being pierced with holes through which the strings are threaded and fixed by means of a knot on the inside. The tension is regulated round the horizontal bamboo rod by means of various devices.

II. MUSICAL INSTRUMENTS REPRESENTED IN TERRA-COTTA FIGURINES

Yo. 02. Two musicians: (*a*) the one on R. playing a transverse flute, blown from an embouchure at the side as at the present day. The modeller has retained the beard of the musician and sacrificed realism in playing the instrument; for the beard covers the embouchure. The flute has a cylindrical bore, and appears to have had at least eight holes from the position of the hands, which are correctly placed, the R. governing the lower holes, the L. the upper. Cf. similar instrument on the relievo slabs from Amarāvatī, Brit. Mus.

(*b*) The musician to L. is playing a pair of bell-shaped cymbals held together by a ribbon or thong. These cymbals, known as the ancient cymbals, give a sound of definite musical pitch, and with this object are sounded by striking one against the other, not by clashing them with a sweeping frictional movement, as is the case with the modern plate-shaped cymbals, which are incapable of producing any musical sound of definite pitch.

Yo. 0021. Musician dancing, and playing upon a stringed instrument having an almost oval body, connected by a short neck to an oval head. This type of instrument, familiar in Europe from the eleventh century, has affinities with the oval Nefer of the Egyptians and with a certain type of oval Persian tambour introduced into Europe by the Moors. The three or four strings were plucked by the fingers.

Yo. 003. l. Monkey playing on the large pear-shaped lute or Rabāb, with three strings, similar to those found on the risers (?) of the steps from a Gandhāra shrine (Brit. Mus.) and on a Sassanian silver dish (Brit. Mus.). This instrument was of high antiquity, the earliest known example being shown on a terra-cotta statuette of Greek post-Mycenean work found on the site of Goshen (in Egypt ?), assigned to 1000 B.C. (Flinders Petrie). It was the archetype of the lute, which, when the bow was applied to it, became known as the Rabāb.

Yo. 003. m. Monkey holding lute similar to that in above.

Yo. 003. d. Musician playing syrinx of eight pipes

apparently covering a range of an octave, the lowest notes being placed to the R., as was the case with the flute in Yo. 02.

Yo. 003. c. Monkey playing upon a primitively designed and modelled syrinx of four or six notes, possibly played by means of a free reed, like the harmonica or mouth-organ of the present day.

Yo. 003. e. Monkey playing upon an archetype of our kettle-drum, having only one parchment head stretched over the aperture of a hollow vessel. The drummer was not *beating* the drum, but obtaining delicate rhythmical effects of varying dynamic intensity, by stroking the head and drumming with the fingers upon it.

Yo. 0032. e. Monkey playing four pipes, apparently of the same length and set in a case, possibly a syrinx, but more probably a primitive mouth-organ, fitted with free reeds (see also Yo. 003. c and Yo. 0032. b).

Yo. 0032. b. Monkey playing upon a set of syrinx or free-reed pipes, arranged in a case in a double row as in the mouth-organs of the present day.

Yo. 0035. u. Monkey playing upon very roughly modelled pipes, as in Yo. 0032. e.

Yo. 0032. a. Monkey playing primitive lute, twanging strings with R. hand; elongated pear-shaped type (see Yo. 003. l). Tail end of lute resting under chin.

Yo. 01. b. Monkey playing primitive lute of older type than the preceding—squat pear-shaped type with little or no neck. Head of instrument not indicated. Held obliquely with neck towards L. shoulder.

Yo. 0047. a. Monkey playing primitive lute, held in horizontal position; R. hand twanging strings, L. hand stopping strings near neck.

Yo. 0032. d. Monkey playing or tuning lute, held in horizontal position.

Yo. 0047. b. Monkey carrying large bass lute, with three strings (broken).

Khot. 0089. Musician playing drum, consisting of cylinder narrow in centre and widening out at each end, over which vellum is stretched. There are indications of thongs used to tighten the heads. The drum was played with the knuckles or the fingers, by gentle rhythmical taps or by a stroking motion performed with the finger-tips. Innumerable delicate and subtle variations in tone and effect were thus obtainable.

Khot. 01. b. Monkey playing primitive lute of squat type, similar to that in Yo. 01. b.

Khot. 01. e. Monkey playing primitive lute, in horizontal position.

Khot. 01. d. Monkey playing primitive syrinx or mouth-organ (see Yo. 003. c, 0032. e, 0035. u).

III. REMAINS OF MUSICAL INSTRUMENTS

N. xxii. 003. Fr. of wooden tail-piece of stringed instrument with five strings.

L. B. iv. 0010. Small stick with mallet head used probably to sound small metal bell or some instrument composed of thin keys of wood or metal, resembling the modern xylophone.

M. i. iv. 0026. Bone plectrum for twanging the strings of instruments of lute and tambour types in order to obtain greater brilliancy of tone in melody. The use of the plectrum with strings from which more than one note was obtained by stopping generally indicates a melody instrument.

M. i. viii. 0013. Fr. of wooden bridge, for supporting the fine wire sympathetic strings of some instrument, of which the string may have been either bowed or twanged.

APPENDIX I

NOTES ON SPECIMENS OF TIBETAN MANUSCRIPTS FROM CH'IEN-FO-TUNG, REPRODUCED IN PLATES CLXXIII, CLXXIV[1]

BY

F. W. THOMAS, M.A., PH.D.

LIBRARIAN OF THE INDIA OFFICE

FROM THE CATALOGUE PREPARED BY

L. DE LA VALLÉE POUSSIN

PROFESSOR AT THE UNIVERSITY OF GHENT

PLATE CLXXIII

Ch. 01. a, b (pp. 94, 95). Pōthī. *Ch.* 01. *a.*: *Dbu-can*; foll. 52, 73 c. x 20·4 c., ll. 12. *Śatasāhasrikā Prajñā-pāramitā*, Vol. 1, foll. 507–34, containing 2nd Kāṇḍa (Dum-bu), 66th–70th Khaṇḍa (Bam-po). Each Khaṇḍa is, as a rule, followed by a colophon giving the name of the scribe.

Ch. 01. *b*: *Dbu-can*; foll. 146 unnumbered, 73 c. x 20·4 c., ll. 12. *Śatasāhasrikā Prajñā-pāramitā.* First Kāṇḍa, 51st–70th Khaṇḍa; 8th and 9th Parivartas. Names of scribes in colophons.

Ch. 05 (p. 310). Roll. *Dbu-can*; foll. 6 or 7, 30·7 c. x 22 c., ll. 19; or foll. 6, 31 c. x 24·8 c., ll. 21. *Aparimitāyur-nāma-mahāyānasūtra* (Kanjur, *Rgyud*, Csoma XIV, fol. 320; Beckh XV, fol. 337).

Ch. 011 (part of bundle 86. 1–4; p. 99). Collection of rolls, containing *Śatasāhasrikā Prajñā-pāramitā.*

PLATE CLXXIV

Ch. 03. a (p. 121). Pōthī. *Dbu-can* (capital letters); 42·8 c. x 8·2 c., ll. 2; interlinear commentary *dbu-med* (cursive writing). A collection of leaves, of which the first is *Buddha-anusmṛti*, a list of the qualities (*guṇa*) of Bhagavat expressed in his titles.

The work is found in the Kanjur (*Mdo*, Csoma XXII. 79–80; Beckh XXIV. 71–72) and Tanjur (*Mdo*, XXXIII. 56 [foll. 158–159]; Cordier, p. 349). Author deest. This text is a *sūtra*; the *vṛtti* (*Mdo*, XXXIV. 2, foll. 14–15) is attributed to Asaṅga, not to Vasubandhu (*Dbyig-gñen*), as stated in our interlinear commentary.

Ch. 03. b (p. 203). Pōthī. *Dbu-med*; foll. 3, 46·3 c. x 11·8 c., about 32–35 ll. [*Ḥdzaṅs blun paḥi mdo*] 'Sūtra of the Wise Man and the Fool'. Extracts and summaries; the second extract is from chapter xxiii.

Ch. 04 (p. 73). Booklet. *Dbu-can*; foll. 1–64 unnumbered, 21·9 c. x 15·3 c., ll. 8. Described on the cover as *Śes rab kyi pka rol tu phyin.* Contents:

(1) [*Ārya-Jinaputrasiddhi-sūtra-nāma-prathamaḥ khaṇḍaḥ*]. Title in colophon (fol. 45*a*). The work is found in the Kanjur (*Mdo*, Csoma XXX. 85 [Tibetan title only]; Beckh XXXII. 71 (*Jinaputrasiddhi*). Ends with the identification of the characters.

[1] See above, pp. 919 sq.

(2) [*Pradīpapraṇidhāna*]. Title in colophon (foll. 45*a*–45*b*). Another hand.

(3) [*Avalokiteśvarabodhisattvacintācakra-stotra*]. Title and colophon (foll. 46*a*–48*a*). Contains 13½ Ślokas.

(4) *Lokaprajñā*; foll. 48*b*–63*a*.

(5) [*Mantroddhṛtanāmāni?*] Another hand; *dbu-med* to some extent. A vocabulary of Tantric words; begins without title; ends abruptly fol. 63*b*, l. 2.

(6) Beginning of a Sūtra: *Evam mayā śrutam*; fol. 64*b* (cover).

Ch. 08 (p. 579 a). Pōthī. *Dbu-med*; foll. 5, numbered (letters) 1–5; 45·5 c. x 7·5 c., ll. 6. *Kaṃsadeśīyārhadvyākaraṇa*, 'The legendary religious history of Khotan.' (Found in Tanjur, *Mdo* XCIV. 44.)

Ch. 011 (part of bundle Ch. 86. iv, p. 99). Roll on stick, containing portion of *Śatasāhasrikā Prajñā-pāramitā*.

Ch. 07 (p. 549). Roll. *Dbu-med*; 139 c. x 35 c., ll. 80 recto; ll. 30 verso. A ritual of offering (*bali*), akṣaras (*bīja*), charms, and other orthodox Mahāyānist formulas of homage and of 'application of merit' to universal enlightenment and happiness. Some parts damaged.

Ch. 010 (p. 507). Pōthī. *Dbu-can-med*; foll. 9, numbered 3–11; 19 c. x 6·5 c., ll. 7; Tantric treatise; begins with a description of the *Jñānasattvakāya*; apparently complete at end.

Ch. 02 (p. 201). Pōthī. *Dbu-can*; 23·4 c. x 4 c., ll. 2; foll. 11, numbered (letters and numerals) 2–12. *Ḥtsho ba rnam par dag pa*, 'Pure Food Sūtra.' The complete title seems to be *Zas kyi ḥtsho ba* . . . (Kanjur, *Mdo*, Csoma XVI. 153–5; Beckh XVIII. 123–5; no Sanskrit title). Defective at beginning; colophon has title only. Bhagavat gives instruction to Maudgalyāyana concerning the former actions of certain Pretas.

Ch. 09 (p. 75). Pōthī. *Dbu-med*; foll. 66, 32·2 c. x 11 c., ll. 9; 30 foll. unnumbered; 31 foll. numbered (letters and numerals); 5 foll. unnumbered. *Ārya-daśabhūmaka*. Incomplete. (Kanjur, *Phal-chen*, Csoma, No. 31; Nanjio 105, 110.)

APPENDIX K

NOTES ON TIBETAN INSCRIPTIONS OF BUDDHIST PAINTINGS FROM CH'IEN-FO-TUNG, TUN-HUANG

BY

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Paper painting, Ch. 00376

(See above, p. 993, and *Thousand Buddhas*, Plate XXXII)

The space under the figure of the saint is divided by two perpendicular lines into three fields, in each of which is written a short Tibetan sentence, in fair *dbu-can* script. In the space on the left are the following words, which are preceded by the usual symbol for *om* :—

°P'ags pa ñan t'o[s] c'en po°[1]
Dus ldan ॥ °kor stoṅ c'ig brgya

'The honourable great Disciple (*mahā-śrāvaka*) Kālika. Retinue (i.e. of disciples) one thousand one hundred.'

Kālika is well known as one of the apostles of the faith in Buddhist records, in which he is usually placed fourth in the succession.[2] It is noteworthy that he is here represented with a bowl in his right hand (another of the Sthaviras, Piṇḍola Bharadvaja, also has a bowl, but in his left), whereas in the more modern pictures of the Sthaviras he is regularly depicted with two ear-rings in his hands.[3]

At the bottom of the central space are two syllables, before which one or two letters may have been obliterated. They are *go bži*. If the first syllable is to be emended to *mgo*, the meaning would be 'four heads', and the reference would be to some detail of iconography or legend which is not evident. It is however possible that the syllable *go* is complete in itself, and that the meaning is 'four ranks'. This would be equally obscure, as it seems hardly possible to strain these words to mean 'fourth rank', namely in the order of apostolic succession.

In the right-hand space is the artist's subscription, in somewhat larger script :—

Do k'oṅ legs kyis
bris ॥

'Do-k'oṅ-legs made the drawing.'

[1] Written ཐོའ. Cf. *Ancient Khotan*, i. p. 549 f.

[2] See E. Pander, *Das Pantheon des Tschangtscha Hutuktu*, p. 84 f.; A. Grünwedel, *Mythol. d. Buddhismus*, pp. 7, 37, 204.

[3] See Pander, *ut supra*, p. 85; Grünwedel, *ut supra*, p. 7; S. Oldenburg, *Sbornik Izobrazhenii 300 Burkhanov* (*Bibliotheca Buddhica*, V), pl. 66, No. 196.

Paper painting, Ch. 00377

(See above, pp. 993 sq., and *Thousand Buddhas*, Plate XXXII)

The space below the figure of the deity is divided into three fields by two perpendicular lines, each of which contains writing in tolerably good *dbu-can* Tibetan. The words in the space on the left side begin with the ligature *st*, which has been struck out by a perpendicular line drawn through it, and then proceeds: *Bla ma p'yogs kyi mgon po sten*. This means literally: 'the Lord of the upper region (is) on top', and apparently refers to the well-known Indian division of space into ten regions. The 'top' in the cosmic system is the zenith, in Sanskrit termed *brāhmī dik*, and 'the Lord of the upper region' is its tutelary deity, who is usually identified with the lower Brahma.[4] Accordingly it would seem that the two medallions in the picture were intended to bear the symbols of the sun and the moon, which in Indian astronomy are imagined to be always revolving in the upper region, their setting and rising being only apparent. The figure in the right-hand medallion shows the same type as usually appears as the attribute of the sun; that in the left medallion, if it was ever drawn, has been obliterated, but we may conjecture that it was meant to be the symbol of the moon.

Immediately below these words are the syllables *gi haṃ t'sags t'ams c'ad* (*sic*). This is obscure; possibly *gi haṃ* has some connexion with the fabulous *gi-wañ* (see Jäschke and Sarat Chandra Das, s. v.), which is also called *gi-hañ*.

In the central space are the syllables *k'a so brgyad*. It would be most natural to translate this as 'thirty-eight *k'a*', taking *so brgyad* together as 'thirty-eight' and leaving *k'a* uncertain, as it may have several meanings besides its primary one of 'mouth'. But it is also possible to join *k'a so*, with the meaning of 'mouth and teeth' (see Jäschke, p. 36), so that it may be translated 'eight mouths of teeth'. In either case the reference, like that of the preceding sentence, is to some obscure and unimportant detail in the attributes of the deity.

In the right-hand space is written, in somewhat larger characters, the subscription of the artist:—

T'e god za leg[5] mos bris.

'T'e-god-za the good man (*sādhu*) made the drawing.'

Drawing on silk, Ch. xxii. 0015

(See above, p. 1023)

The Tibetan inscription runs round the central panel, not in concentric circles, but in a spiral, which begins in the inside and ends at the outer edge. The characters are fairly well shaped *dbu-can*, and on the whole resemble those of the MS. of the Śālistamba-sūtra found in the First Expedition (see *Ancient Khotan*, vol. i. p. 548 ff., vol. ii. plate CXVII). The archaic *drag* or final *d* does not occur; but the letter ཀ is regularly written with a small ear on the right side, and *myi* is used instead of the modern *mi*. The vowel *i* is written in three ways, viz. the ordinary modern manner, a variety of this with a double curve, and a form like the ordinary modern vowel but turned in the reverse direction (see *Ancient Khotan*, vol. i. p. 549); this last form is certainly used by preference in certain connexions, e.g. in Sanskrit words such as *amrita* (for *amṛta*), *bimale*, *hilokini*, though even here the use is not uniform, and I have denoted it by a double dot over the letter.[6]

The text is as follows:—

Om[7] ‖ bcom ldan °das ma °p'ags pa spyan ras gzigs dbañ la p'yag °t'sal lo ‖ bcom ldan °das ma °p'ags pa so sor °brañ ba c'en mo la p'yag °t'sal lo ‖ °p'ags pai t'ugs rjei byï[n] gyi rlabs kyis ‖ an lha skyes la bsruñ žiñ byin gyis brlab [t]u gsol ǀ bcom ldan °das ma glañ po c'ei[8] lha sta∗s[9] kyis gzigs ma t'ams cad du kun nas

[4] Cf. Sarat Chandra Das, *Tib.-English Dictionary*, s.v. *tsañs-pa*, p. 1021.

[5] Correct to *legs*.

[6] The utter inconsistency with which the two signs for the vowel *i*, the rightward and the leftward curves, are used is well shown in the MS. Ch. 00183, now Brit. Mus. Or. 8212 (77), which contains a Tibetan version of the *Prajñā-pāramitā-hṛdaya* written by a worthy who gives his name as Ling-hi Lha-°dus, and spells the syllable *Ling* with the rightward curve and *hi* with the leftward, which would be in direct opposition to the rules of Chinese phonetics if he meant to denote by the former a long vowel. The first five lines of his text contain *gyi* twice with rightward curve, twice with leftward; *gyis* once with rightward curve; *ñid* thrice with rightward, once with leftward curve; *myi* once with rightward, thrice with leftward curve. Evidently here the two forms were used indifferently.

[7] Denoted by the usual symbol.

[8] Written *divisim* in two syllables, with a dot between them.

[9] Possibly *stañs*.

p'yogs t'ams cad bci[ṅ] * [da]ṅ । rdo rjei žags pas bciṅ bas । bdag °jigs pa c'en po brgyad las bsgral du gsol ॥ badzra dzvala biśuddha । [ka]ra kara । b[h]ū[r]i bhūri । bhagabati । garbhabati garbhabati । garbha-bīśodhani । kukśī-sampurani[10] । dzvala dzvala । tsala tsala । dzvalani ॥ lhaī c'u sa kun tu c'ar dbab tu gsol ॥ amrita-barśani[11] । debata । abatarani ॥ bde bar gśegs pai gsuṅ rab bdud rtsi mt'so ** sku daṅ ldan ba ॥ lha skyes la dbaṅ bskur du gsol । °t'ab pa daṅ । t'ab mo[12] daṅ । rtsod pa daṅ । °gyed [pa da]ṅ । rmyi lam ṅan pa daṅ । ltas ṅan pa daṅ । bkra myī śis pa daṅ । sdig pa t'ams cad rnam par sbyoṅ ba । gnod sbyin daṅ । srin po daṅ । klu t'ams cad °jom ba । . . . bs[13] °jigs skrag pa । lha skyes °jigs pa t'ams cad daṅ । gnod pa t'ams cad daṅ । nad °go ba t'a[m]s cad daṅ । nad t'ams cad las t'ams cad tu rtag par bsruṅ du gsol । bsruṅ du gsol[14] ॥ [ba]la bala । balabati dzaya dzaya ॥ om amrīte[15] । amrīta*ne bara prabara[16] [b]iśuddhe huum[17] phaṭ phaṭ svāhā ॥ amrīta-bīlokīni । garba-saṅrakkśani[18] । akarśani[19] huum huum phaṭ svāhā ॥ om[20] bīmale dzaya bare । amrīte huum huum[21] phaṭ phaṭ svāhā ॥ om bhara bhara । sambhara sambhara । indrīya-biśodhani huum huum phaṭ phaṭ ruru tsala svāhā ॥ om maṇīdharī . . . hum phaṭ svāhā ॥

This may be approximately translated as follows :—

' Reverence to the Bhagavatī Ārya-Avalokiteśvarī ![22] reverence to the Bhagavatī Mahā-pratisarā ! By means of the blessing of the Honourable One's grace, I pray that she may bestow blessing in protection of gods and men. I pray that the Bhagavatī who gazes in the manner (?) of the great elephant god, completely confining all regions of space everywhere and binding them with the fetter of the thunderbolt, may give protection from her own eight great terrors.[23] *Vajra jvala viśuddha, kara kara, bhūri bhūri, bhagavati, garbhavati garbhavati, garbha-viśodhani, kukṣi-sampūraṇi, jvala jvala, cala cala jvalani.* I pray that she may cause to rain the god's water-soil (?) everywhere. *Amṛta-varṣiṇi, devata, avataraṇi.* I pray that she who has the form of a . . . lake of the nectar of the Sugata's holy teaching may give power to gods and men. I pray that she who completely removes strife and battle and war and discord and evil dreams and evil omens and misfortune and practice of all sins, who overcomes all Yakṣas, Rākṣasas, and Nāgas, who fears . . . , may always wholly guard gods and men from all terror and all harm and all pestilence and all disease. *Bala bala, balavati jaya jaya. Om amṛte, amṛta**ne bhara prabhara, viśuddhe huum phaṭ phaṭ svāhā, amṛta-vilokini, garbha-saṃrakṣiṇi, ākarṣini huum huum phaṭ svāhā. Om vimale jaya vare, amṛte huum huum phaṭ phaṭ svāhā. Om bhara bhara, sambhara sambhara, indriya-viśodhani huum huum phaṭ phaṭ ruru cala svāhā. Om maṇidhari . . . hum phaṭ svāhā.*'

It is noteworthy that the above prayer is addressed to the goddess Avalokiteśvarī, the Chinese Kuan-yin, who is the female counterpart of the Bodhisattva Avalokiteśvara,[24] whereas it is the latter who is depicted in the central medallion. This drawing with its inscription is a document of some importance in the history of the cult of these two deities.

Silk banner, Ch. lvi. 002

(See above, p. 1074, Plate LXXXVII)

Above the head is written in Tibetan characters the word *gcen*. In Tibetan this word generally means ' elder brother '; but it is not clear how this sense applies to the present case. Down the left side of the painting (the right proper) is written in a rude Tibetan hand, apparently different from that of the other inscription, *ba-ca-ra-baṅ-ne*, which seems to be a barbarous attempt to reproduce the name Vajrapāṇi. The sound-shifting here is interesting, and suggests Mongol influence.

[10] Read *kukṣi-sampūraṇi.*

[11] For the Sanskrit *amṛta-varṣiṇi.*

[12] The dictionaries give *°t'ab mo.*

[13] Very uncertain.

[14] Possibly the repetition of *bsruṅ du gsol* is due to error.

[15] The spelling of this word here and elsewhere should be *amṛte*, etc.

[16] The *ne* and *prabara* are somewhat uncertain.

[17] Written here and elsewhere (except in the last clause) ཧཱུམ.

[18] Read *garbha-saṃrakṣiṇi.*

[19] Read *ākarṣiṇi.*

[20] Written here and in the following two cases with long vowel, the length being denoted by a subscript འ.

[21] The འ here is written without a tick on the right side.

[22] Literally, ' the Mistress, the Honourable One who has the power of glances of the eye '.

[23] The *Dharma-saṅgraha* lxxi enumerates five terrors. It seems, however, more likely that the ' terrors ' (*°jigs*) here mentioned signify the Eight Bhairavas or something corresponding to them in Buddhist myth, though the proper Tibetan term for Bhairava is *°jigs byed.* If this is so, it helps to make more clear the derivation of the cult of Avalokiteśvara and his female counterpart from that of Śiva (cf. Grünwedel, *Myth. d. Buddhismus*, p. 132 f.), for the eight Bhairavas belong to the circle of Śiva and are forms of him.

[24] See, inter alia, *Das Pantheon des Tschangtscha Hutuktu*, pp. 75 ff.

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GENERAL INDEX

THE system followed in the transcription of Sanskrit, Prākrit, Persian, Turkī, and Arabic words closely agrees with that approved of by the International Congress of Orientalists in 1894. In the case of local names, no attempt has been made to restore the original forms of any Persian and Arabic elements contained in them or to systematize the spelling of such Turkī words as enter into their composition, but the actual forms heard on the spot have been reproduced in phonetic transcription. The spelling of Chinese names and terms conforms to Wade's system of transliteration (as adopted in Professor A. H. Giles's *Chinese-English Dictionary*), except in Appendices *A* and *E*, where MM. Chavannes and Petrucci have followed the system adopted by the École Française d'Extrême-Orient. Where discrepancies have occurred in transcription, the Index is to be taken as a final criterion.

The first occasion on which a Chinese word is given in the original characters is indicated in the Index by printing the number of the page in italics. Page numbers in heavy type indicate the principal passages where subjects frequently referred to in connexion with Buddhist art remains, especially paintings, have been discussed.

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A. = Ara-tam, q. v.
A. T. = Ak-terek, q. v.
A-ch'i-ni, Hsüan-tsang's name for Kara-shahr, *1178*.
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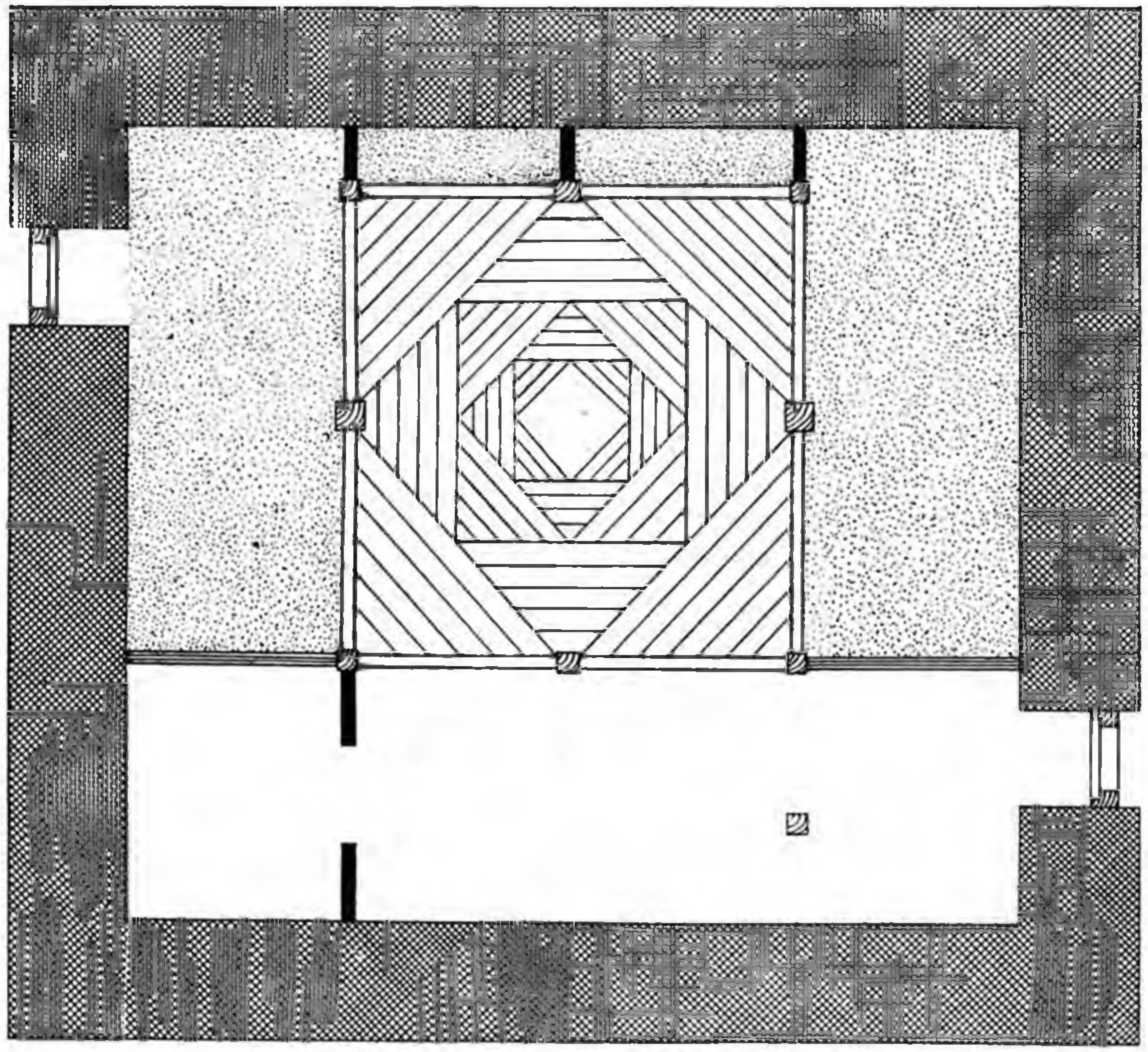
PLAN
SHOWING DISPOSITION OF ROOM, WITH CONSTRUCTION OF SKYLIGHT CEILING,
IN
HĀKIM OBAIDULLAH'S HOUSE,
MĪRAGRĀM.

SCALE

5 0 5 10 feet



Wall of timber and plaster
Wall of rough stone and clay
Platform of clay
Boarding of wood
Post of wood
Beams of central ceiling

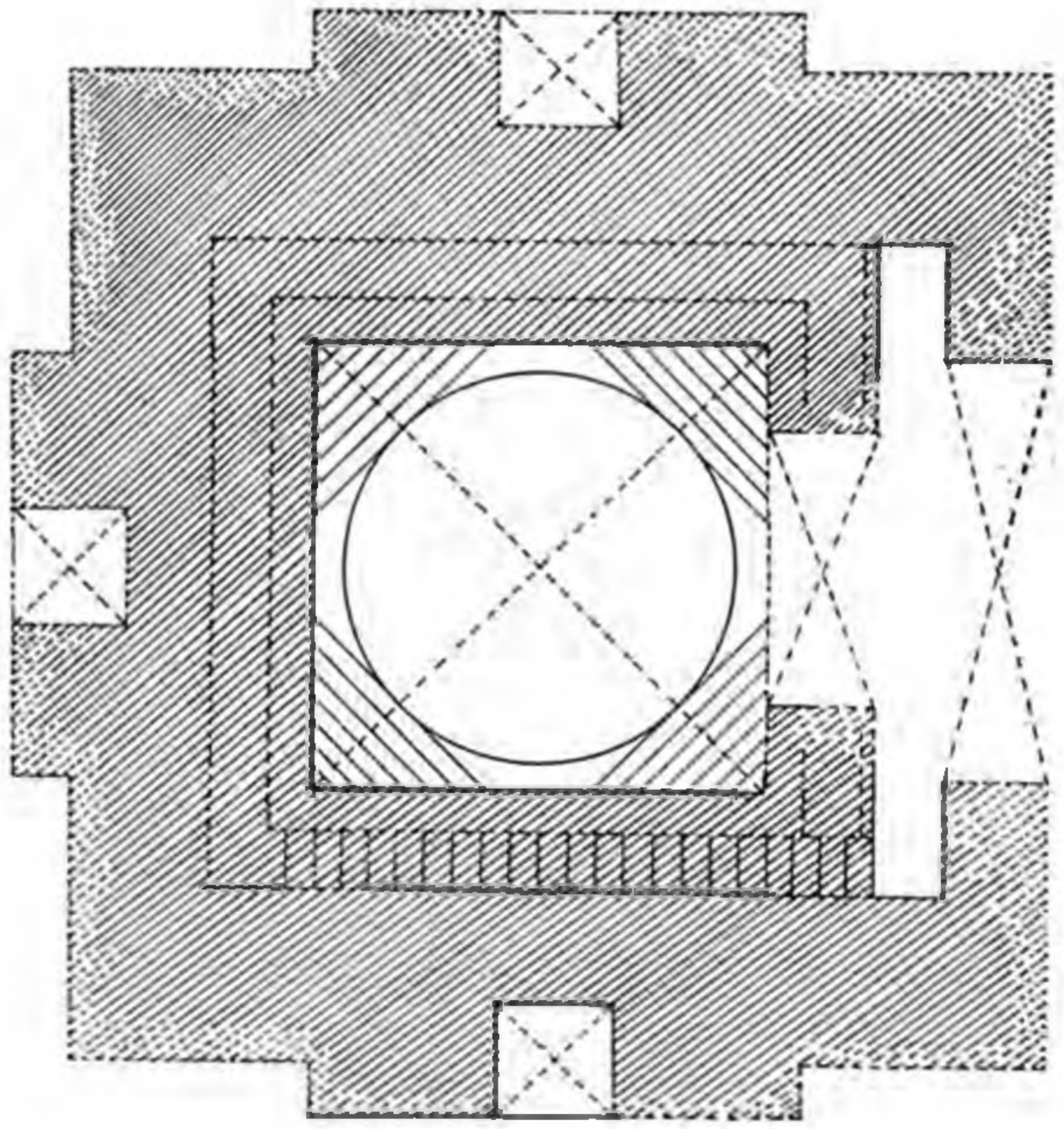
GROUND PLAN
OF
RUINED TEMPLE AT GUMBAT, TALĀSH.

SCALE

6 4 3 2 1 0 5 10 15 20 Feet

N

Stone masory intact
ditto ditto broken or lost



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OF
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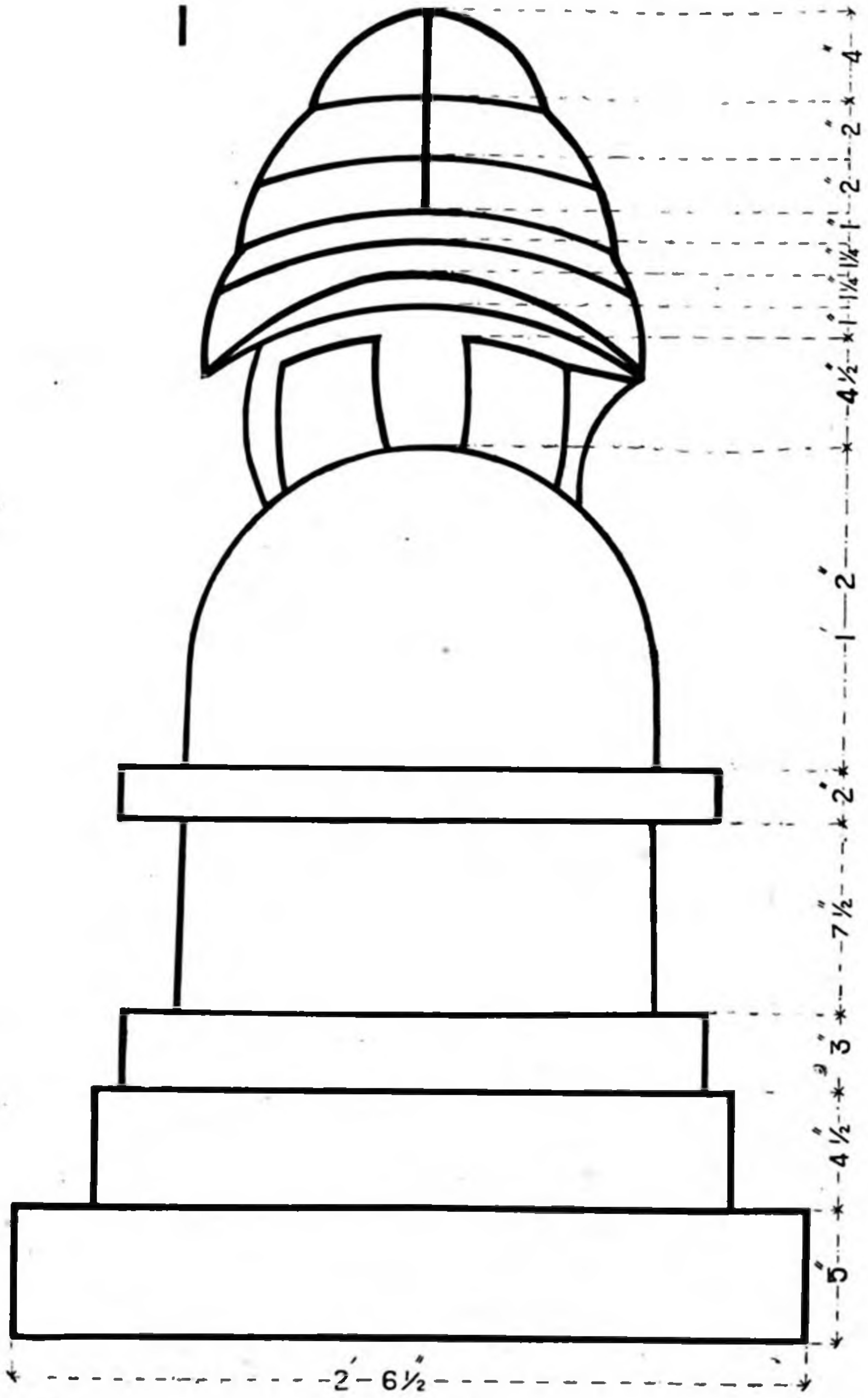
AND
II. CHARRUN, MASTŪJ.

I



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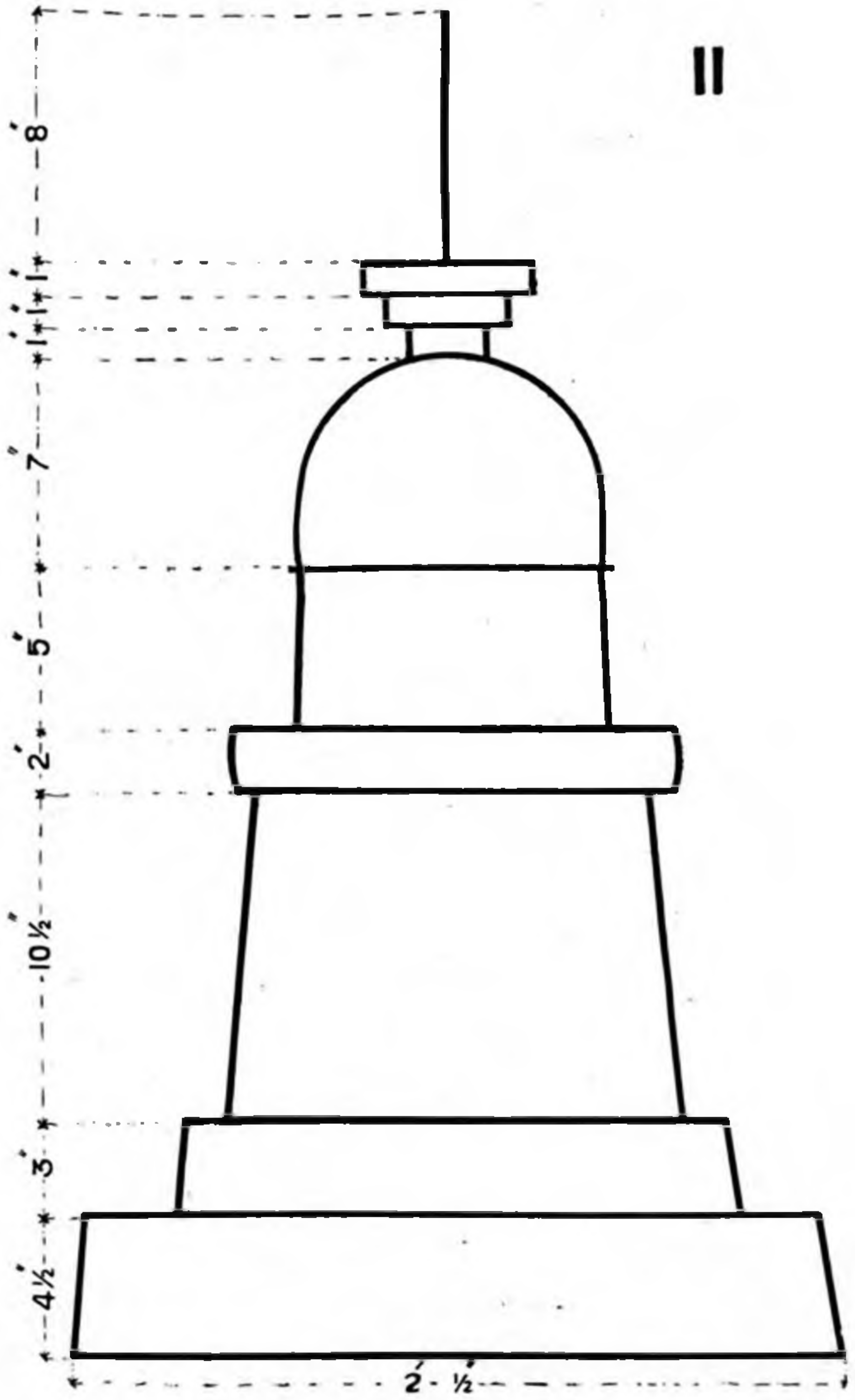

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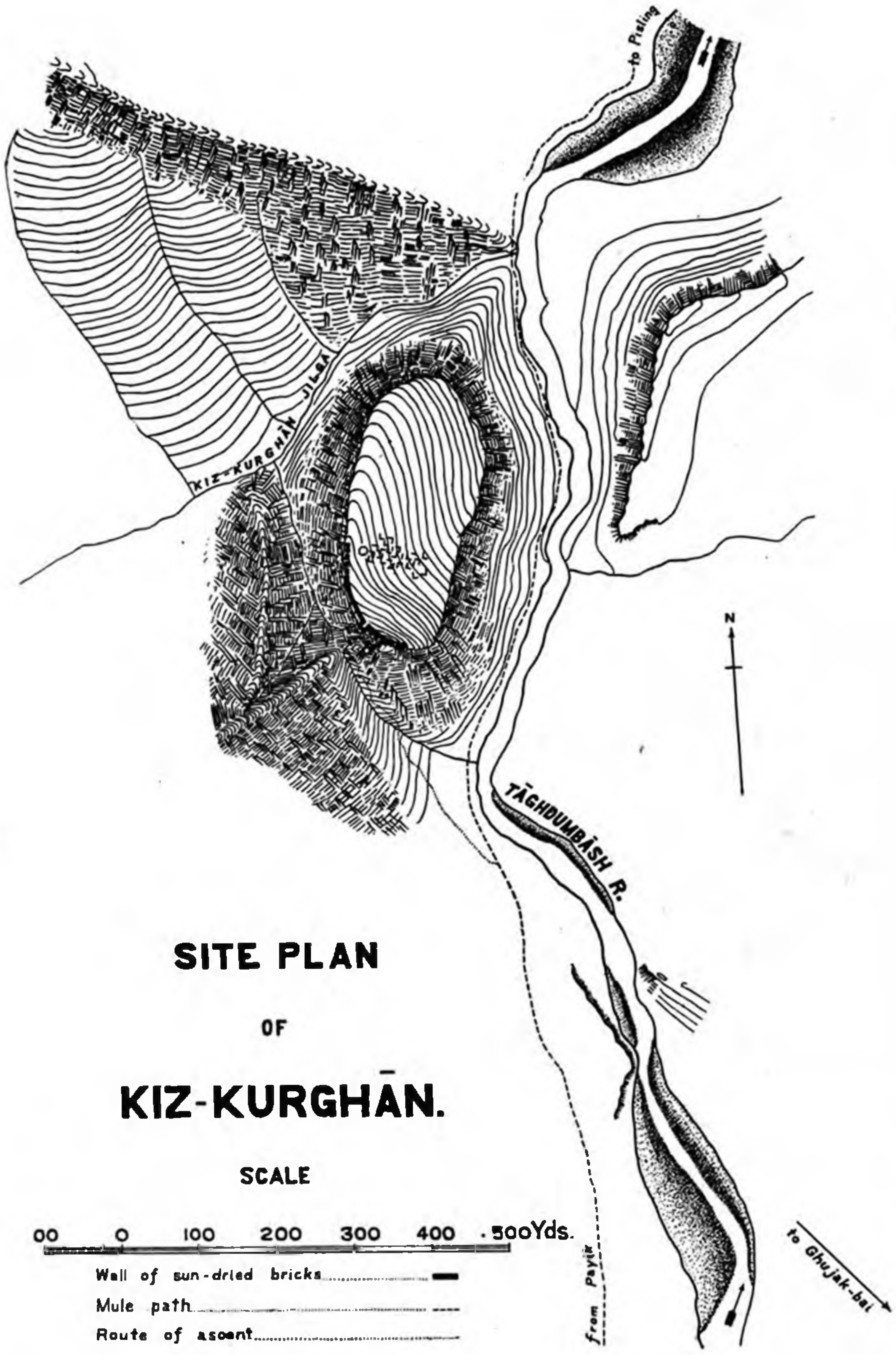

SITE PLAN

OF

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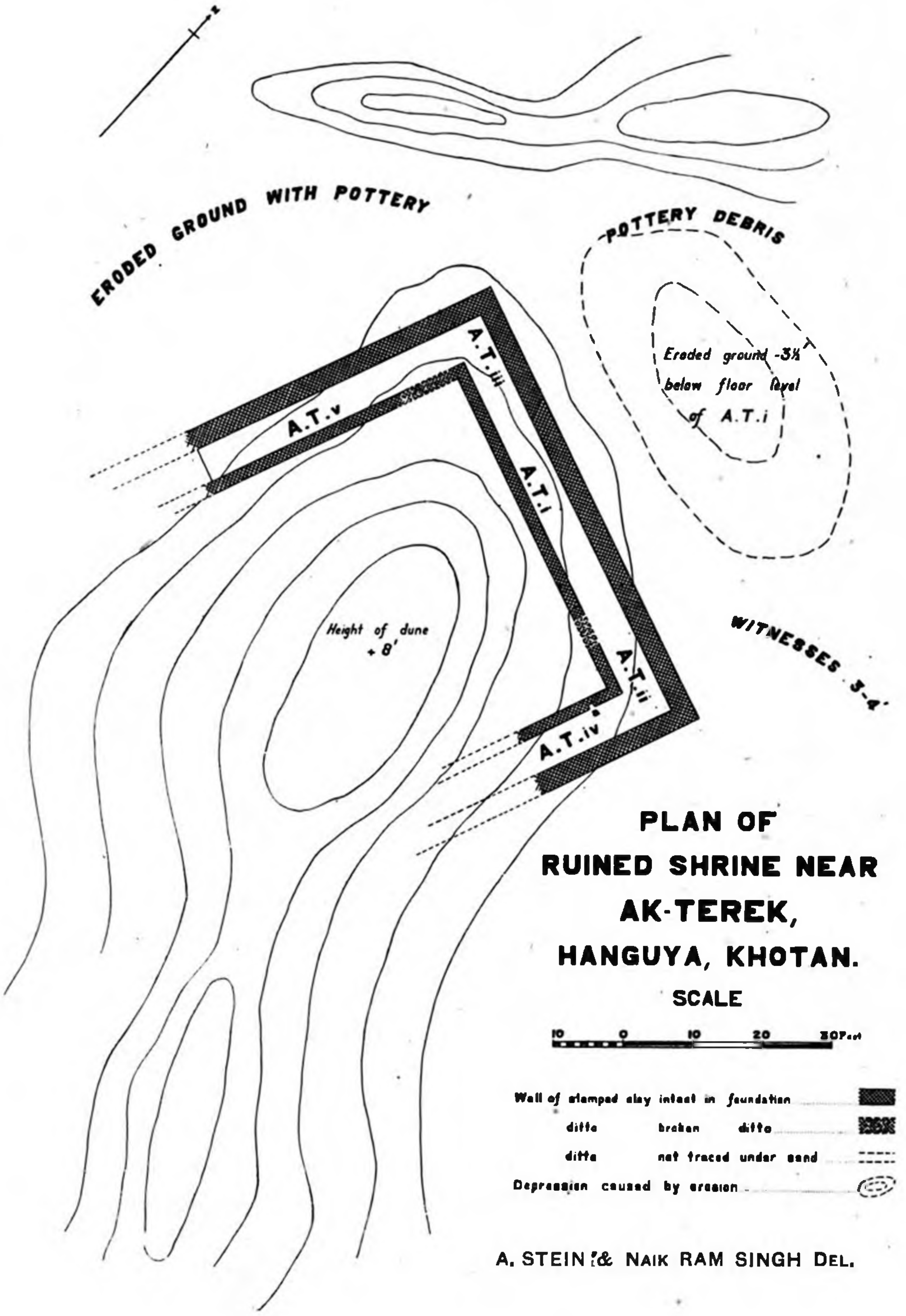

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AK-TEREK,
HANGUYA, KHOTAN.

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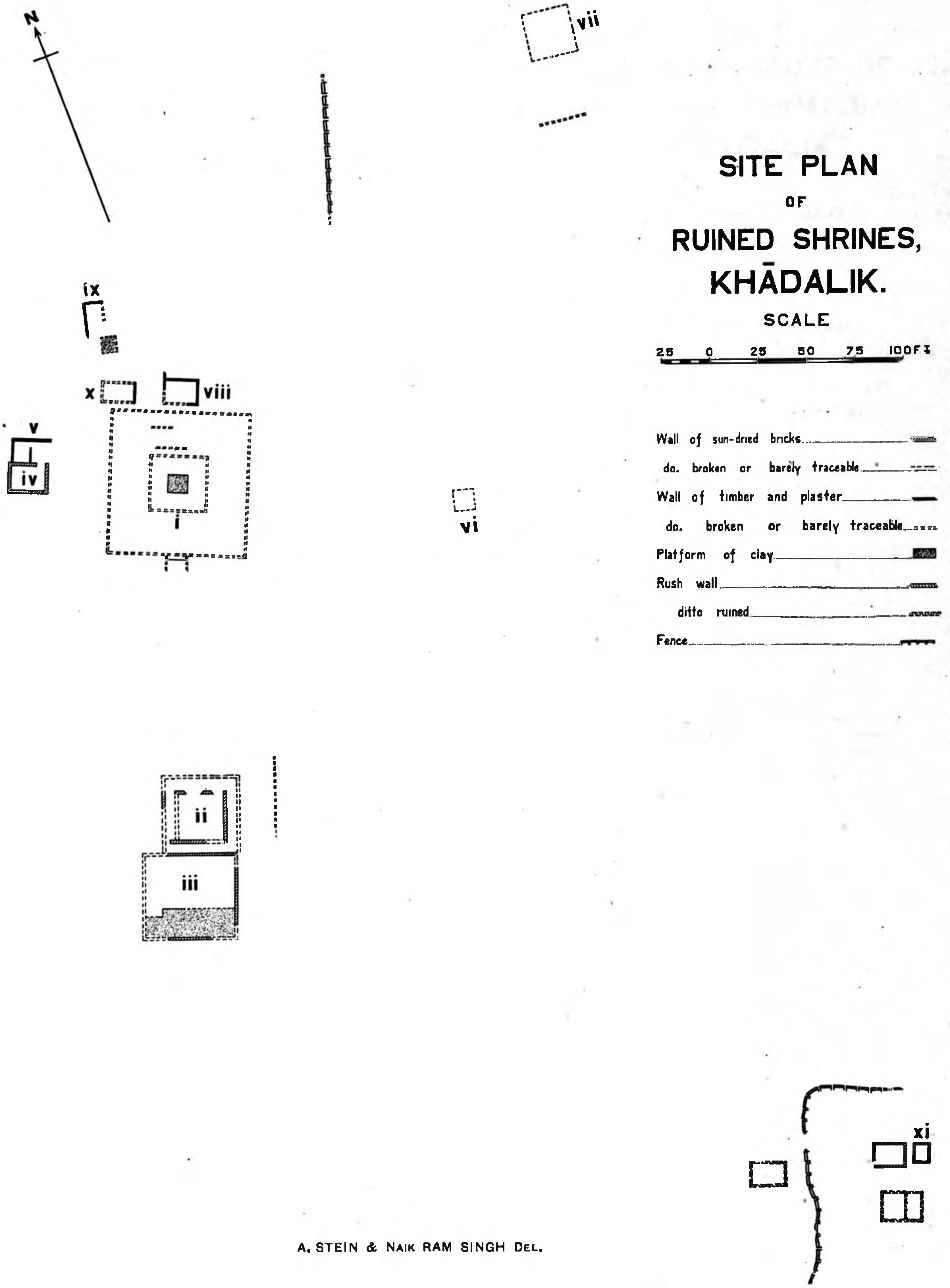
N
vii
SITE PLAN
OF
RUINED SHRINES,
KHĀDALIK.
SCALE
25 0 25 50 75 100 FT.
ix
x
viii
v
iv
i
vi
Wall of sun-dried bricks
do. broken or barely traceable
Wall of timber and plaster
do. broken or barely traceable
Platform of clay
Rush wall
ditto ruined
Fence
ii
iii
xi
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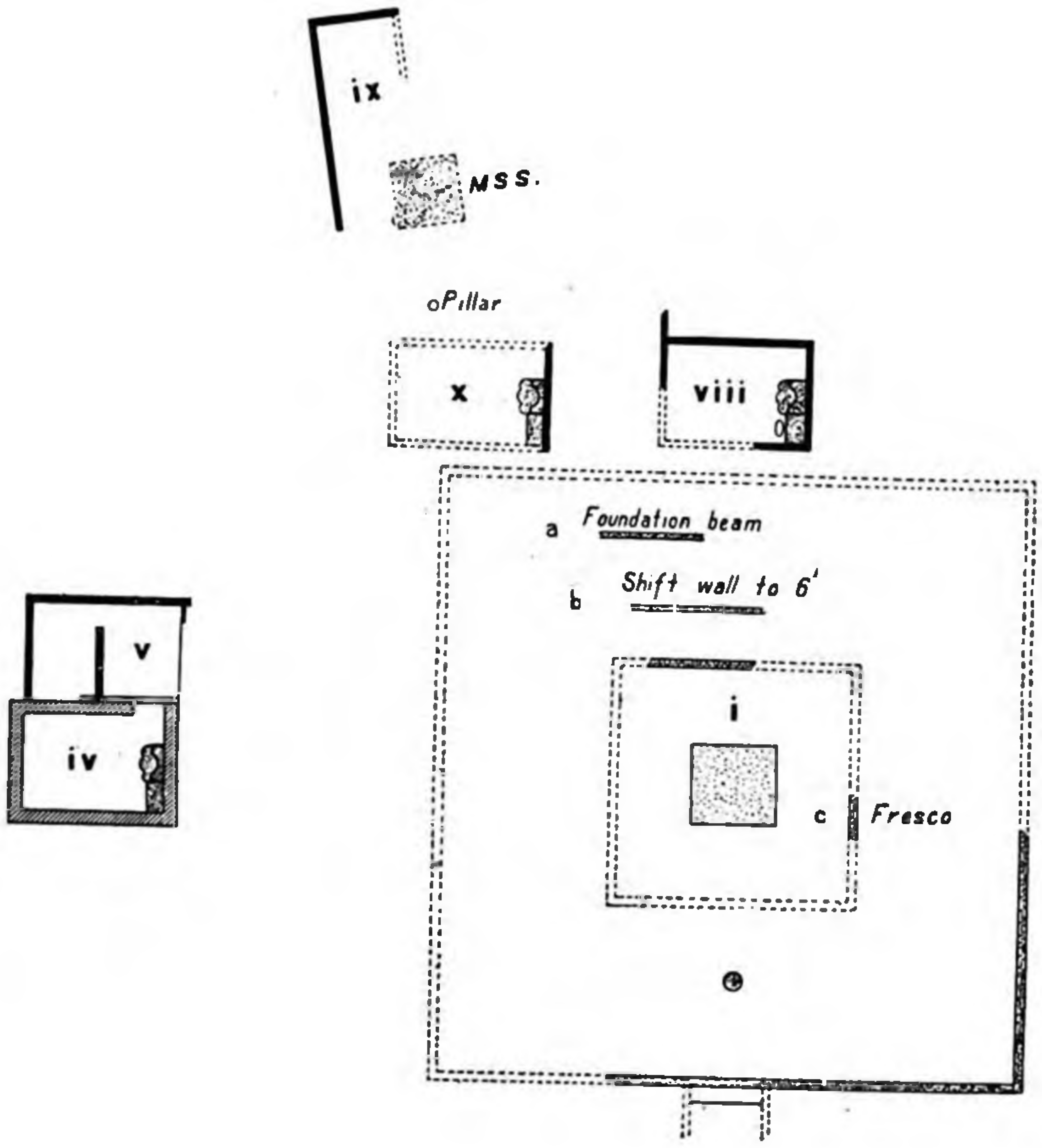
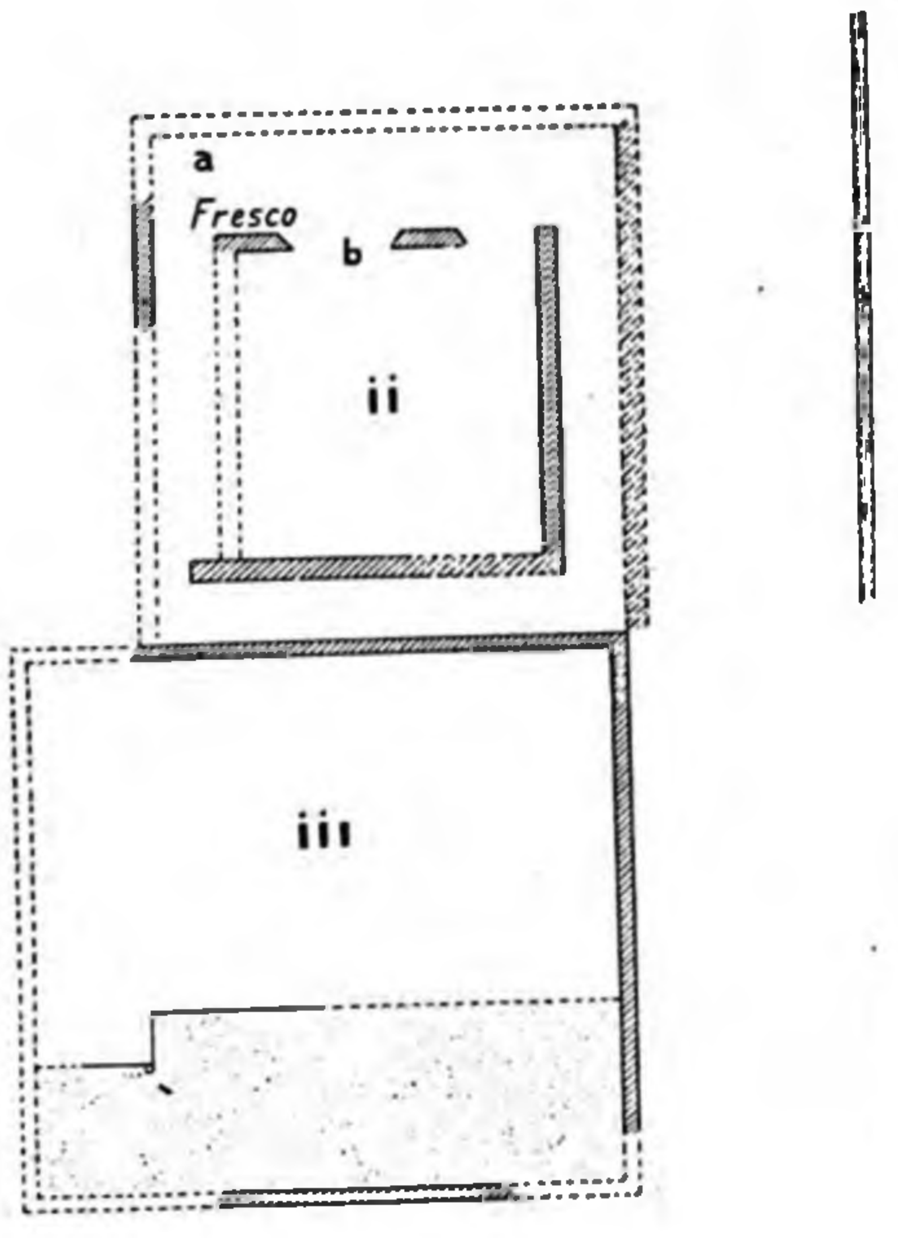
PLAN OF MAIN GROUP OF RUINED SHRINES, KHĀDALIK.

SCALE

10 0 10 20 30 40FT.



Wall of sun-dried bricks
ditto broken
ditto barely traceable
Wall of timber and plaster
ditto broken
ditto barely traceable
Platform of clay

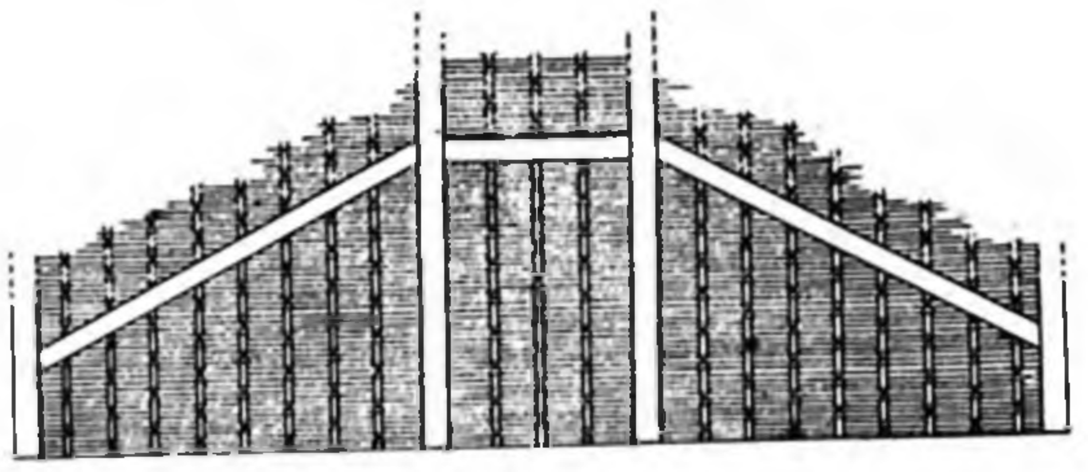


SECTION OF TIMBER AND WATTLE WALL IN SHRINE viii., KHĀDALIK.

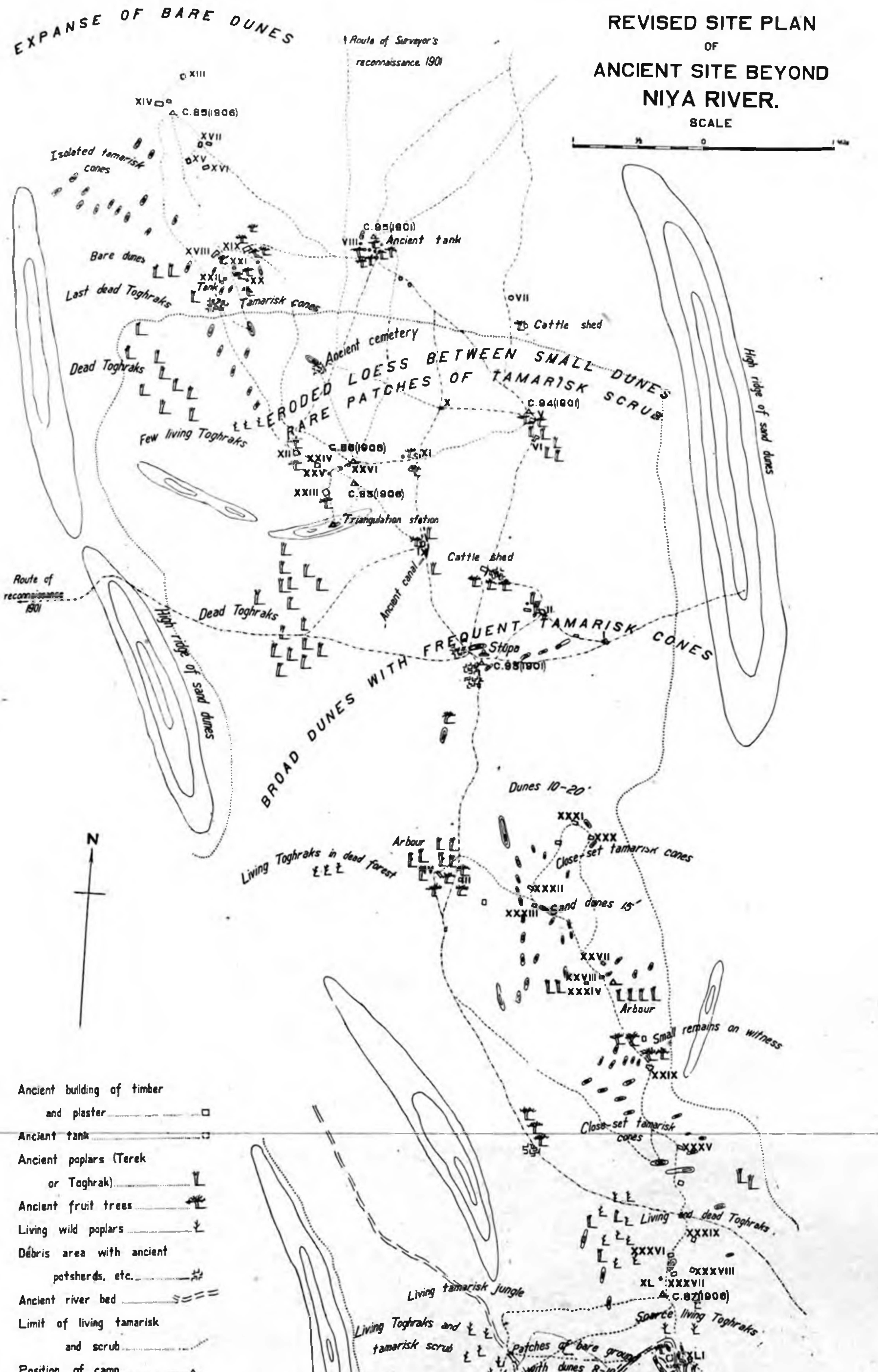
SCALE

5 4 3 2 1 0 5 10FT.

Timber framework — Wattle of reeds

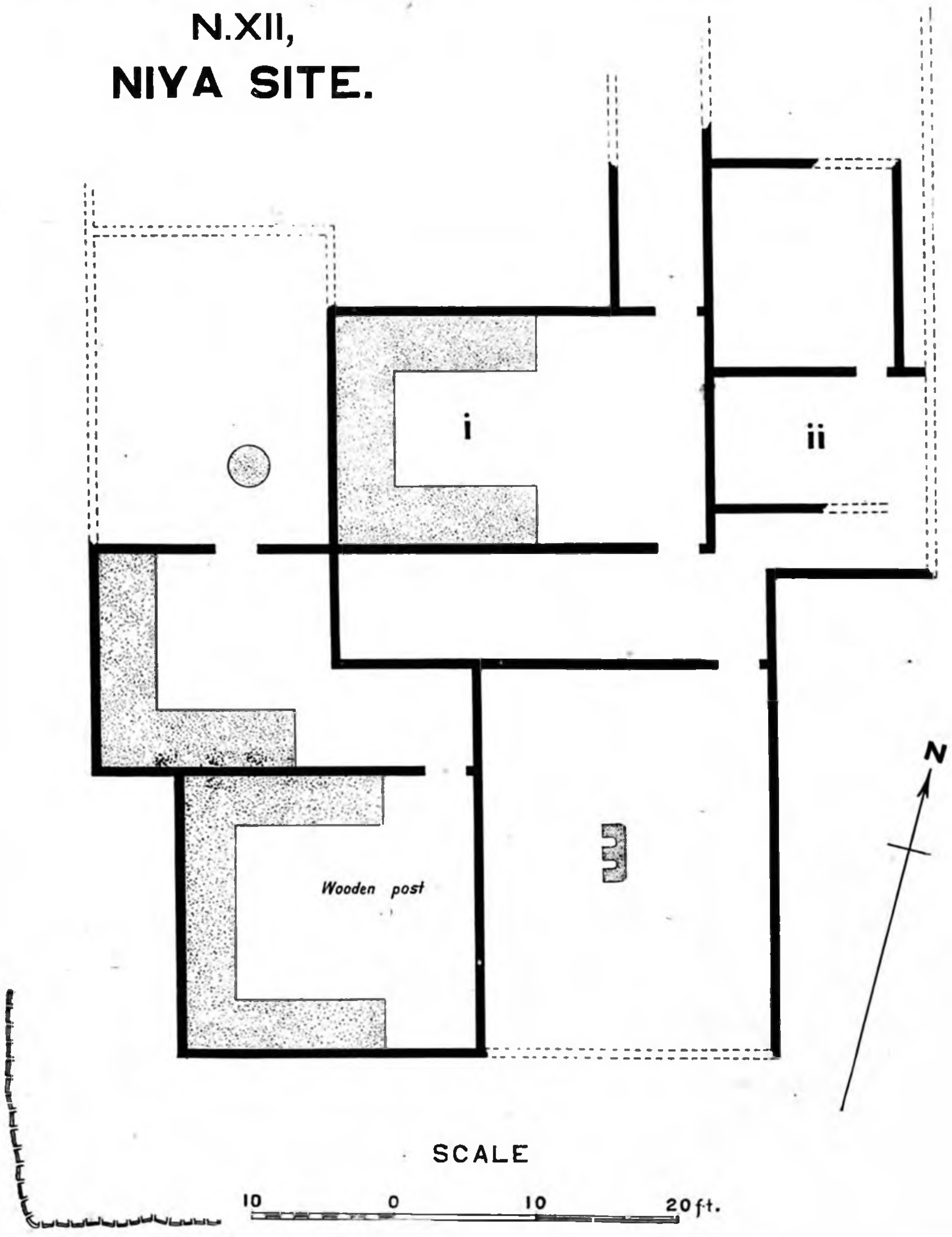


A. STEIN & NAIK RAM SINGH DEL.


REVISED SITE PLAN
OF
ANCIENT SITE BEYOND
NIYA RIVER.
SCALE
EXPANSE OF BARE DUNES
Route of Surveyor's reconnaissance 1901
C.85(1906)
Isolated tamarisk cones
Bare dunes
Last dead Toghraks
Tank
Tamarisk cones
C.95(1901)
Ancient tank
Cattle shed
Ancient cemetery
Dead Toghraks
ERODED LOESS BETWEEN SMALL DUNES
RARE PATCHES OF TAMARISK SCRUB
C.94(1901)
Few living Toghraks
C.86(1906)
C.85(1906)
Triangulation station
High ridge of sand dunes
Route of reconnaissance 1901
Dead Toghraks
Ancient canal
Cattle shed
FREQUENT TAMARISK CONES
Stūpa
C.93(1901)
BROAD DUNES WITH
High ridge of sand dunes
Dunes 10-20'
N
Arbour
Living Toghraks in dead forest
Close-set tamarisk cones
Sand dunes 15'
Arbour
Small remains on witness
Close-set tamarisk cones
Living and dead Toghraks
C.87(1906)
Living tamarisk jungle
Sparse living Toghraks
Living Toghraks and tamarisk scrub
Patches of bare ground with dunes 8-10'
Ancient building of timber and plaster
Ancient tank
Ancient poplars (Terek or Toghrak)
Ancient fruit trees
Living wild poplars
Débris area with ancient potsherds, etc.
Ancient river bed
Limit of living tamarisk and scrub
Position of camp
Routes of 1901
Routes of 1906
A. STEIN & R. S. RAM SINGH DEL.

PLAN OF ANCIENT RESIDENCE N.XII, NIYA SITE.

Wall of timber and plaster
ditto barely traceable
Platform of clay
Fence

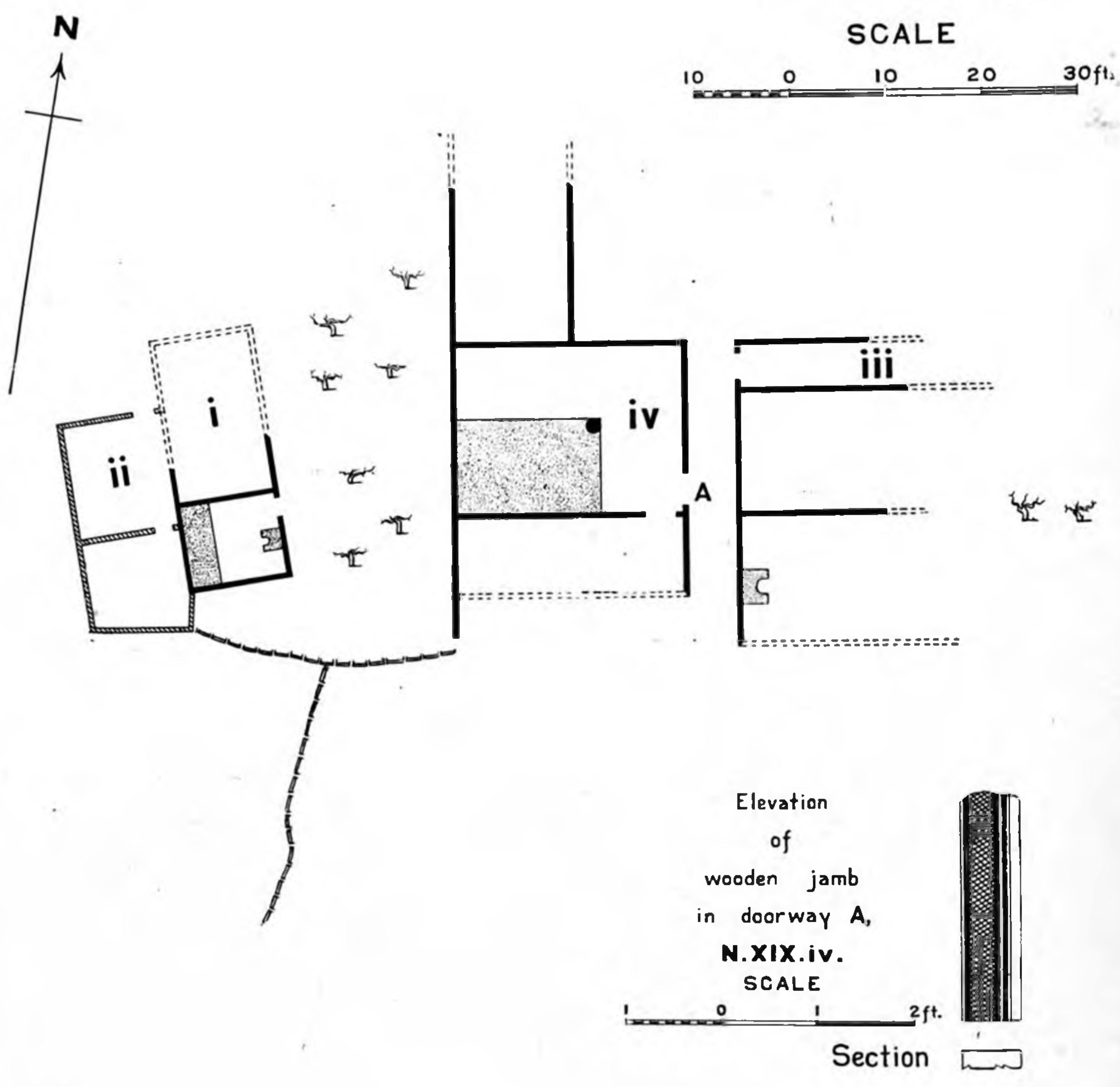


PLAN OF RUINED HOUSE N.XIX, NIYA SITE.

SCALE

10 0 10 20 30ft.

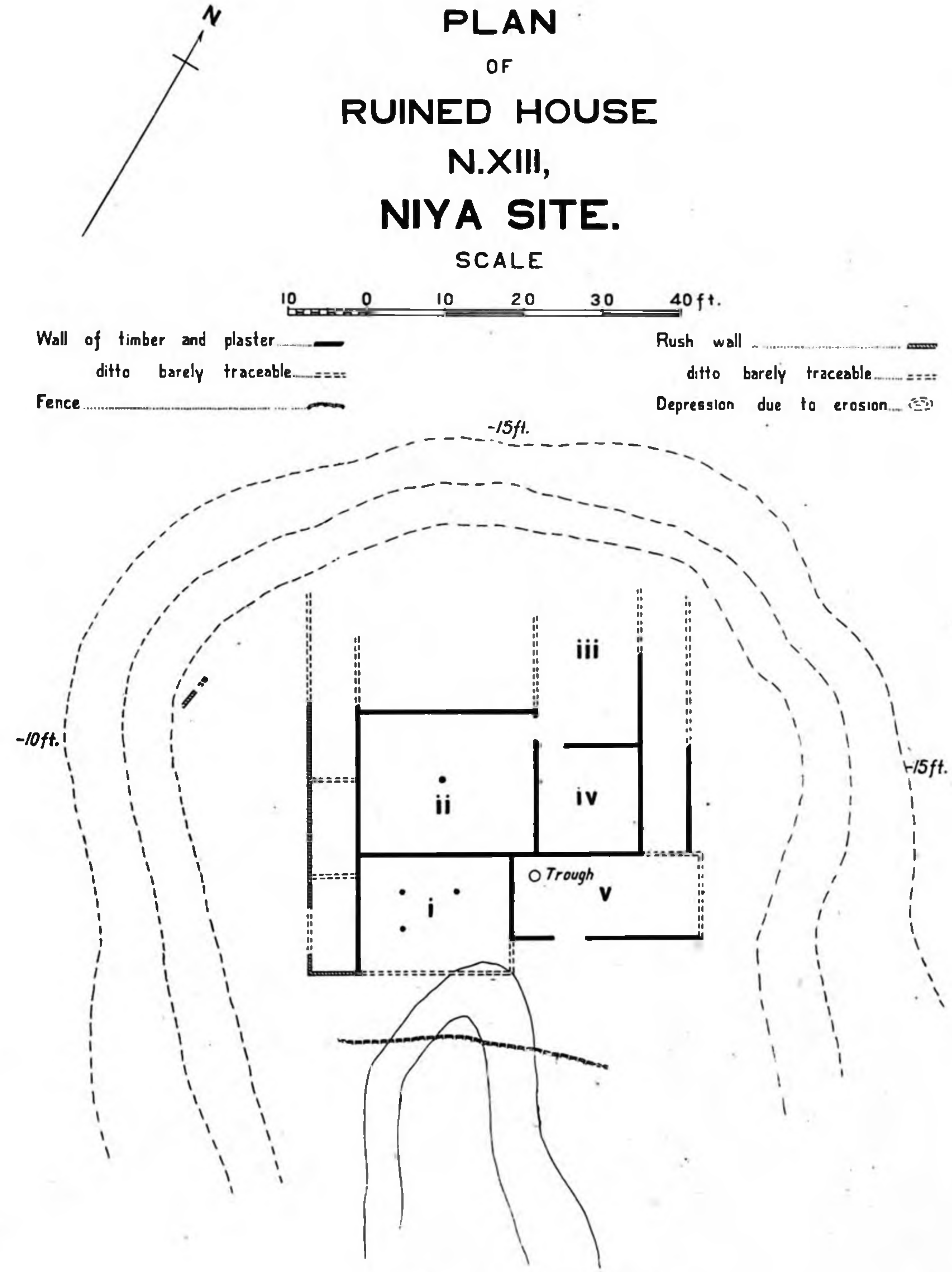
Wall of timber and plaster
ditto barely traceable
Rush wall
Platform of clay
Fence
Ancient fruit tree



A. STEIN & NAIK RAM SINGH DEL.

PLAN
OF
RUINED HOUSE N.XIII, NIYA SITE.

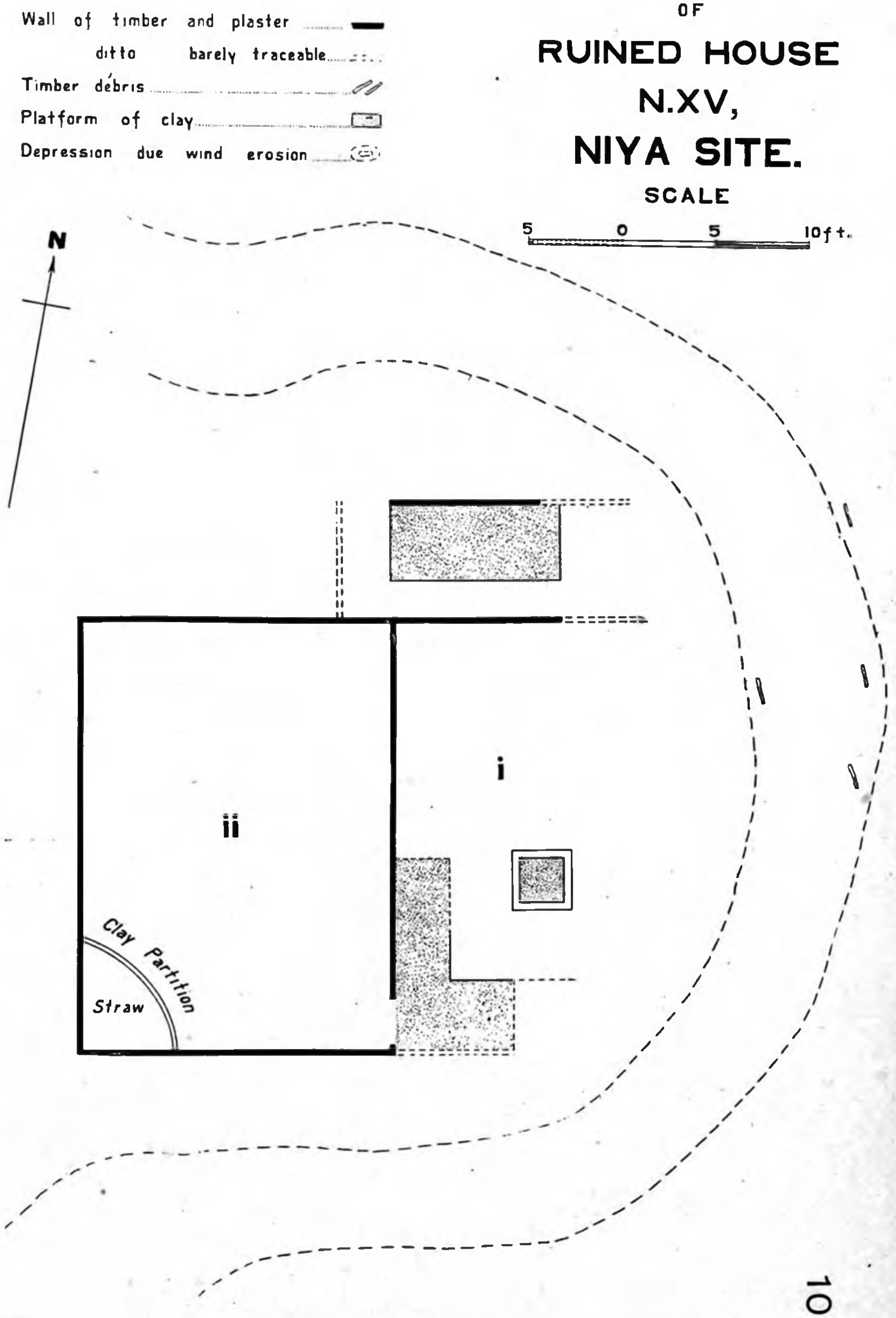
SCALE



A. STEIN & NAIK RAM SINGH DEL.

PLAN
OF
RUINED HOUSE N.XV, NIYA SITE.

SCALE



10

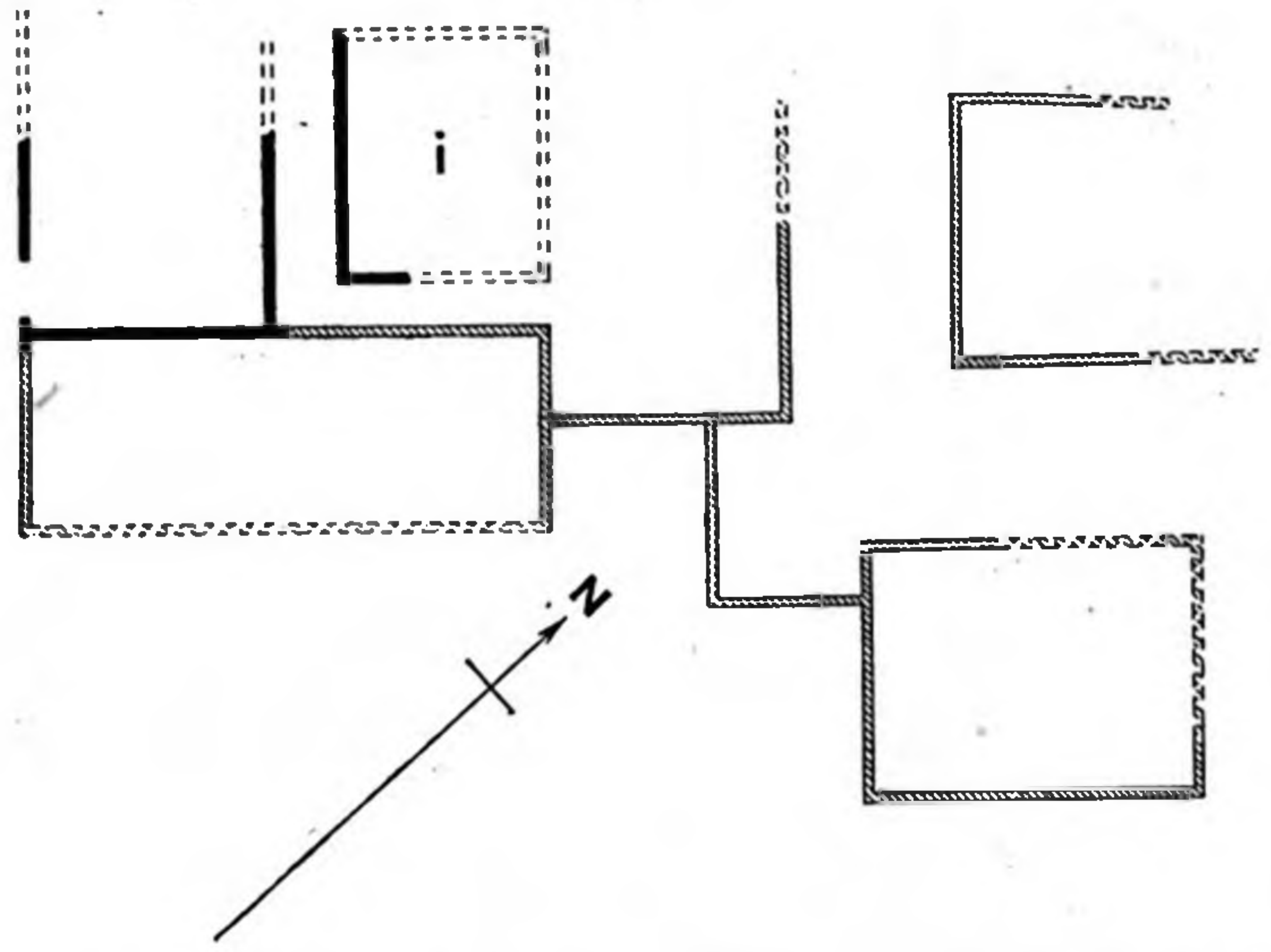
SCALE

10 0 10 20ft.

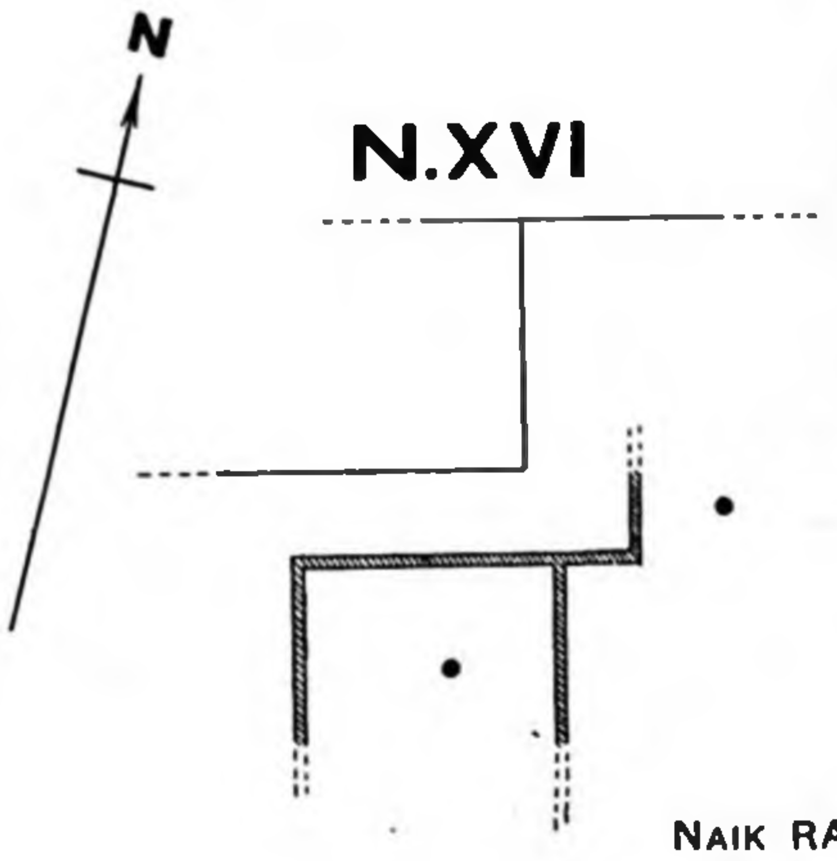
Wall of timber and plaster
ditto barely traceable
Rush wall
ditto barely traceable
Wooden post

PLAN
OF
RUINED HOUSES
N.XVI AND XVIII,
NIYA SITE.

N.XVIII



N.XVI



SKETCH
OF
ANCIENT WOODEN CUPBOARD
FROM N.XXII. iii.

SCALE

5 4 3 2 1 0 5ft.

NAIK RAM SINGH DEL.

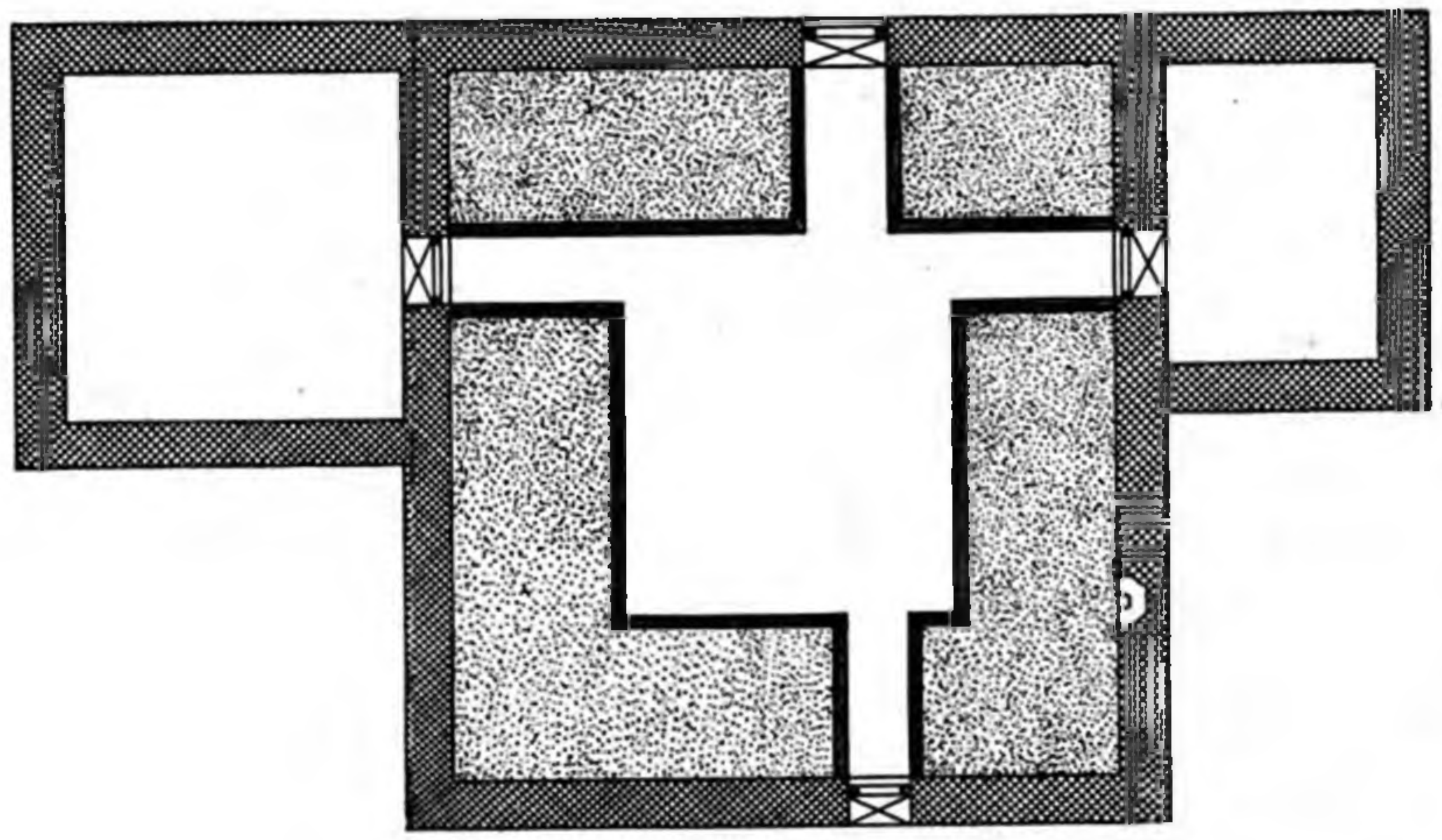
PLAN OF AIWĀN
IN
MŪSA DARŌGHA'S HOUSE,
BĀGH-JIGDA, YARKAND.

SCALE

10 0 10 20 30 40 Ft

Wall of sun-dried bricks .... Raised platform of clay ....

Wooden boarding .... Wooden posts of roof ....

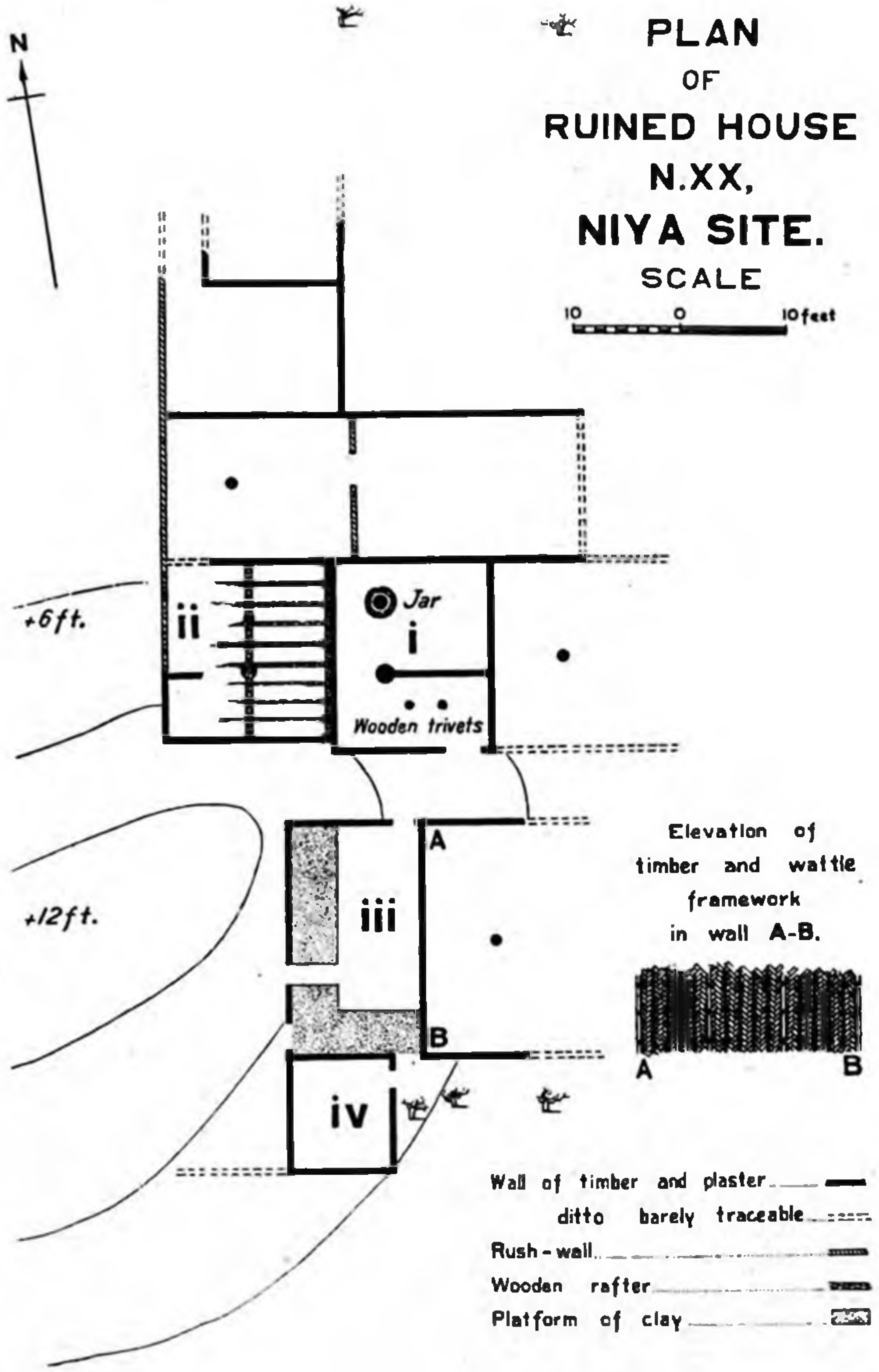


A. STEIN & NAIK RAM SINGH DEL.

PLAN
OF
RUINED HOUSE
N.XX,
NIYA SITE.

SCALE

10 0 10 feet

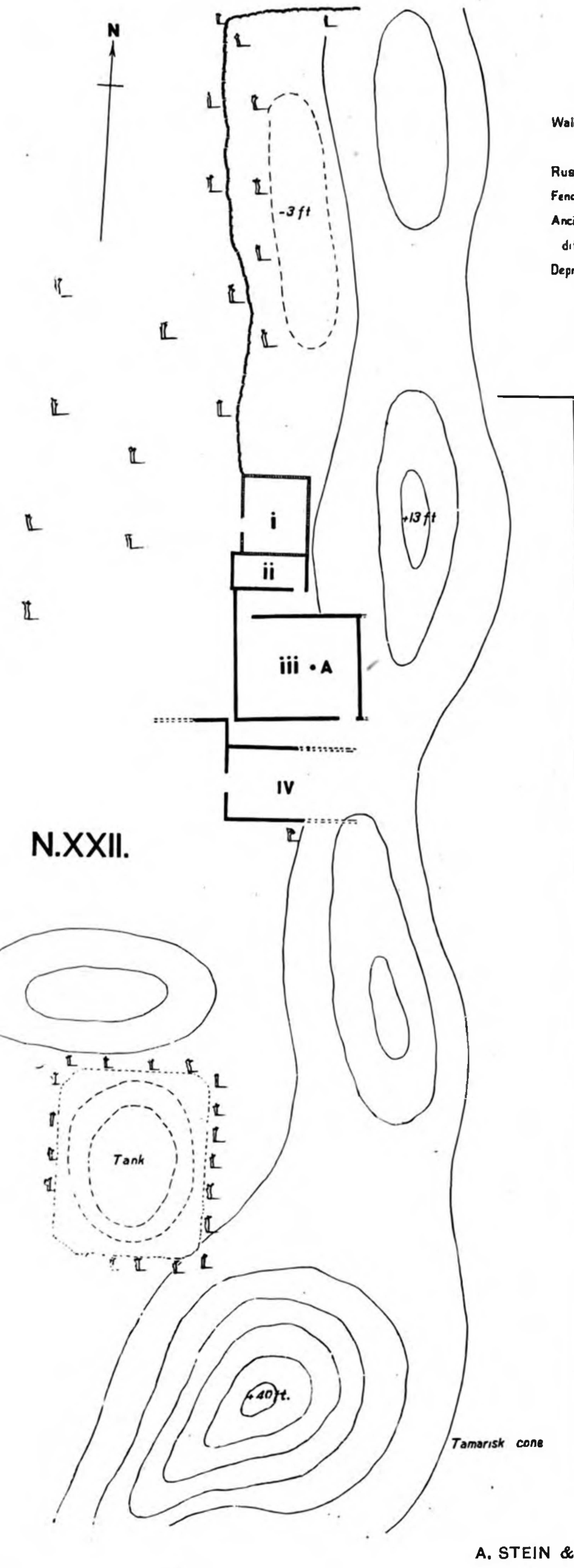


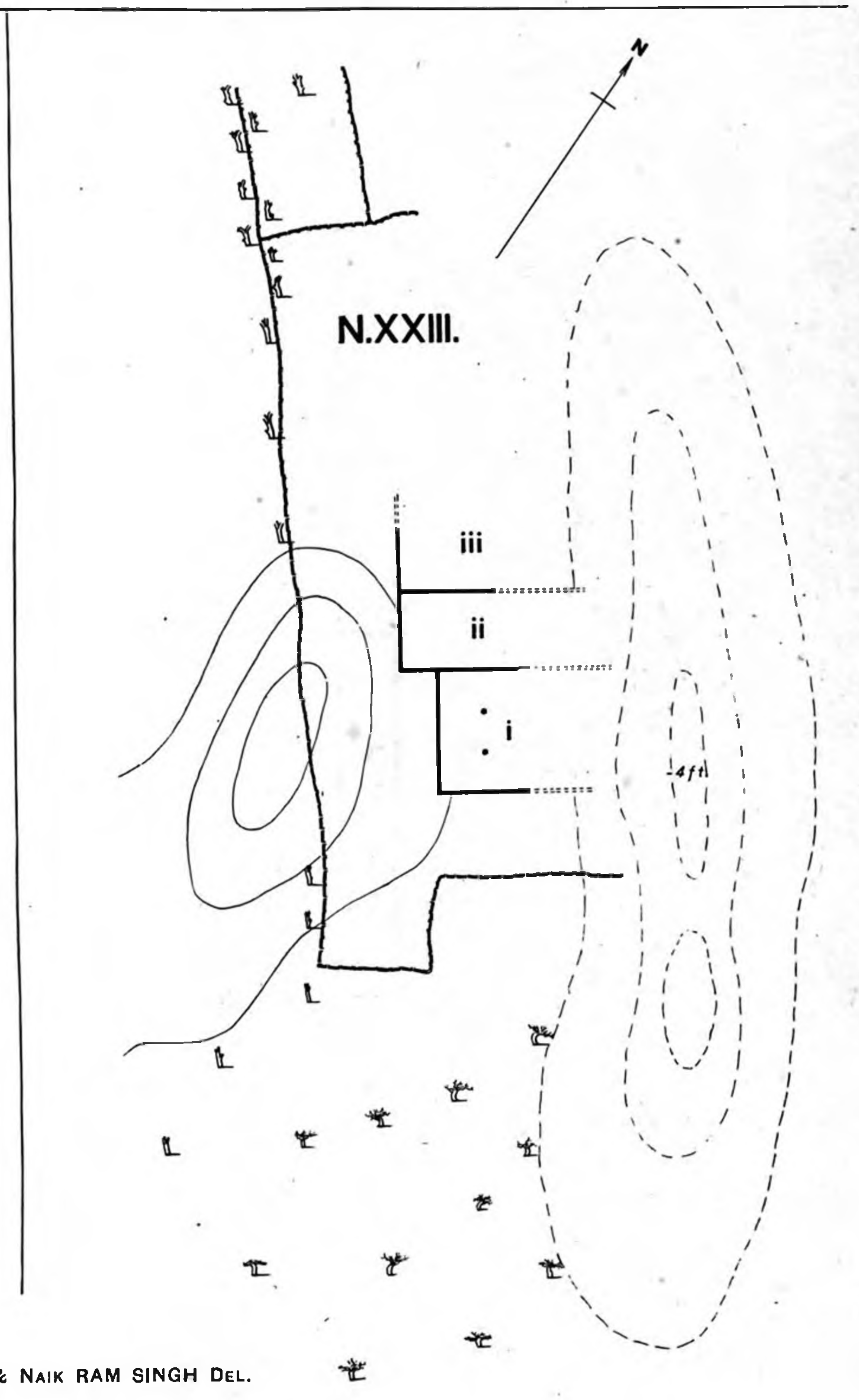
PLANS
OF
ANCIENT HOUSES, N.XXII AND N.XXIII, NIYA SITE.

SCALE

10 0 10 20 30 40ft.

Wall of timber and plaster
ditto barely traceable
Rush wall
Fence
Ancient fruit tree
ditto poplar tree
Depression due to wind erosion





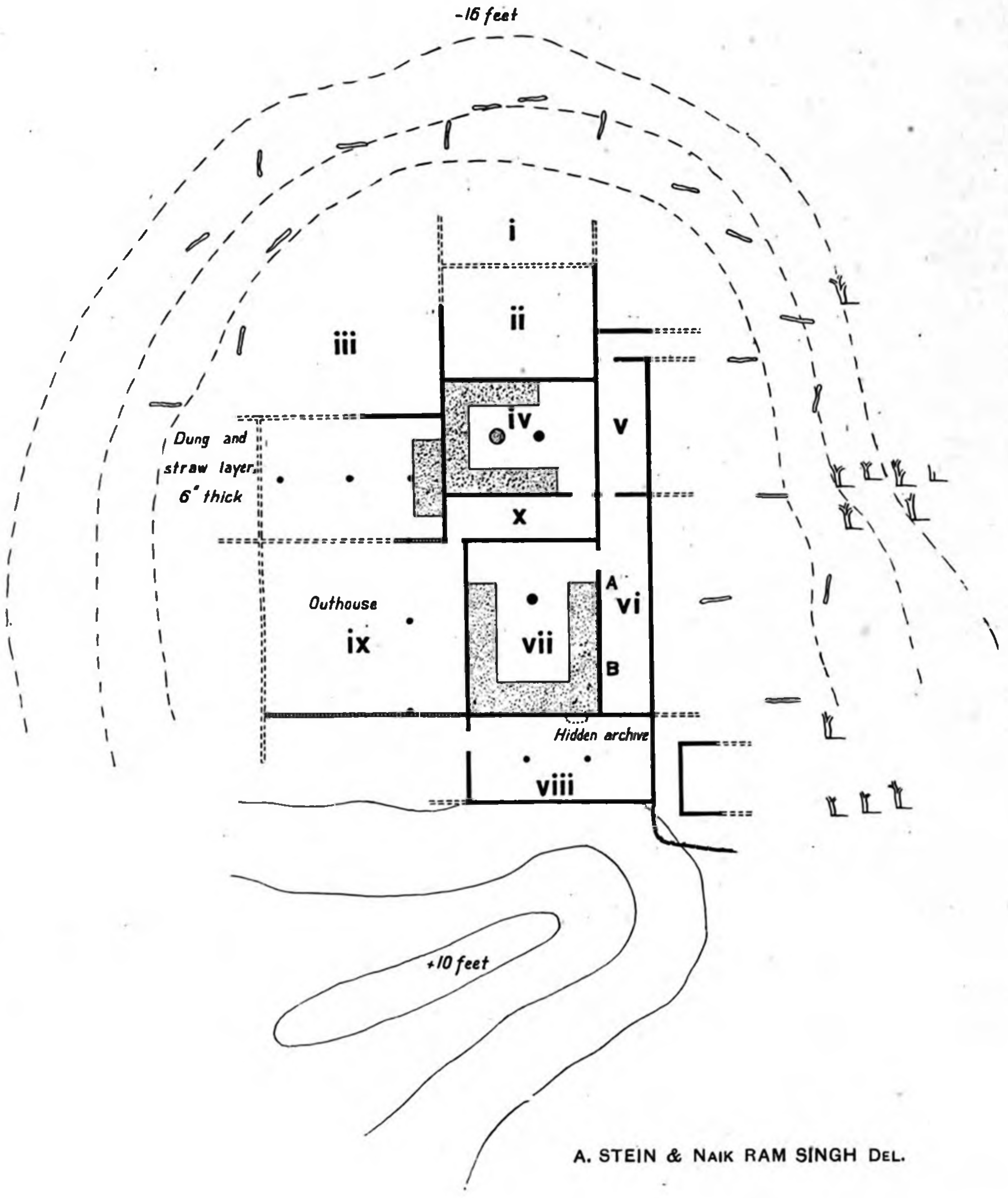
A. STEIN & NAIK RAM SINGH DEL.

PLAN OF ANCIENT RESIDENCE N.XXIV, NIYA SITE.

SCALE

10 0 10 20 30 40ft.

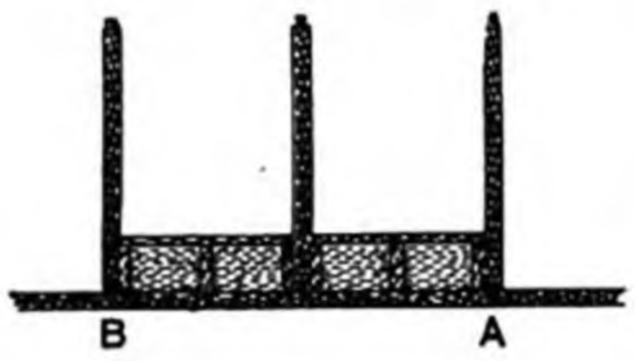
Wall of timber and plaster
ditto barely traceable
Rush wall
Platform of clay
Fence
Timber débris
Ancient poplar tree
Depression due to wind erosion



Elevation of panelled windows A B between rooms vi. and vii.

SCALE

5 0 5 10 15 feet.



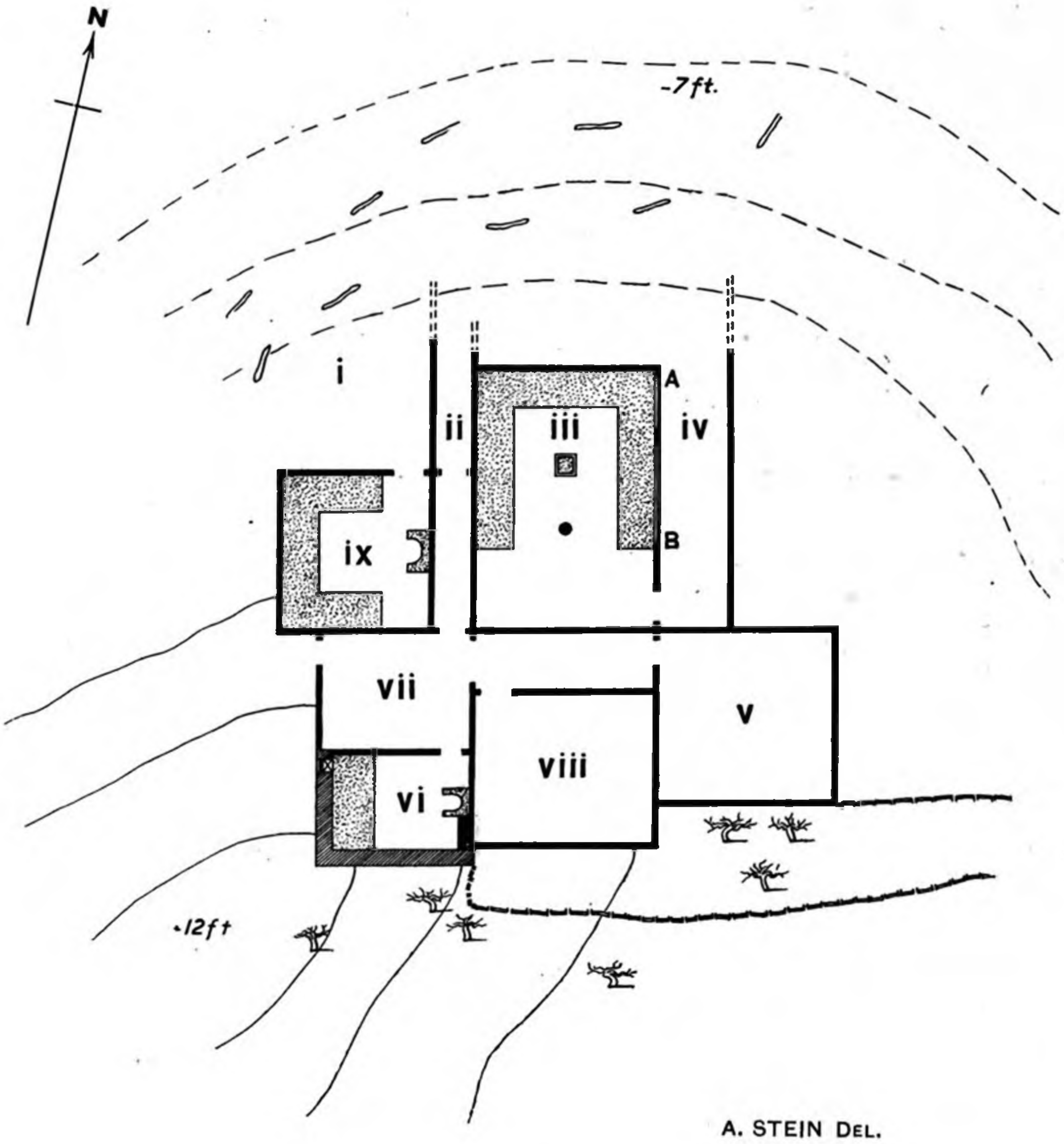
A. STEIN & NAIK RAM SINGH DEL.

PLAN
OF
ANCIENT RESIDENCE
N.XXVI,
NIYA SITE.

SCALE

10 0 10 20 30 feet

Wall of timber and plaster
ditto barely traceable
Wall of sun-dried bricks
Platform of clay or fire place
Boarding of wood
Fence
Ancient fruit tree
Depression due to wind erosion
Timber debris



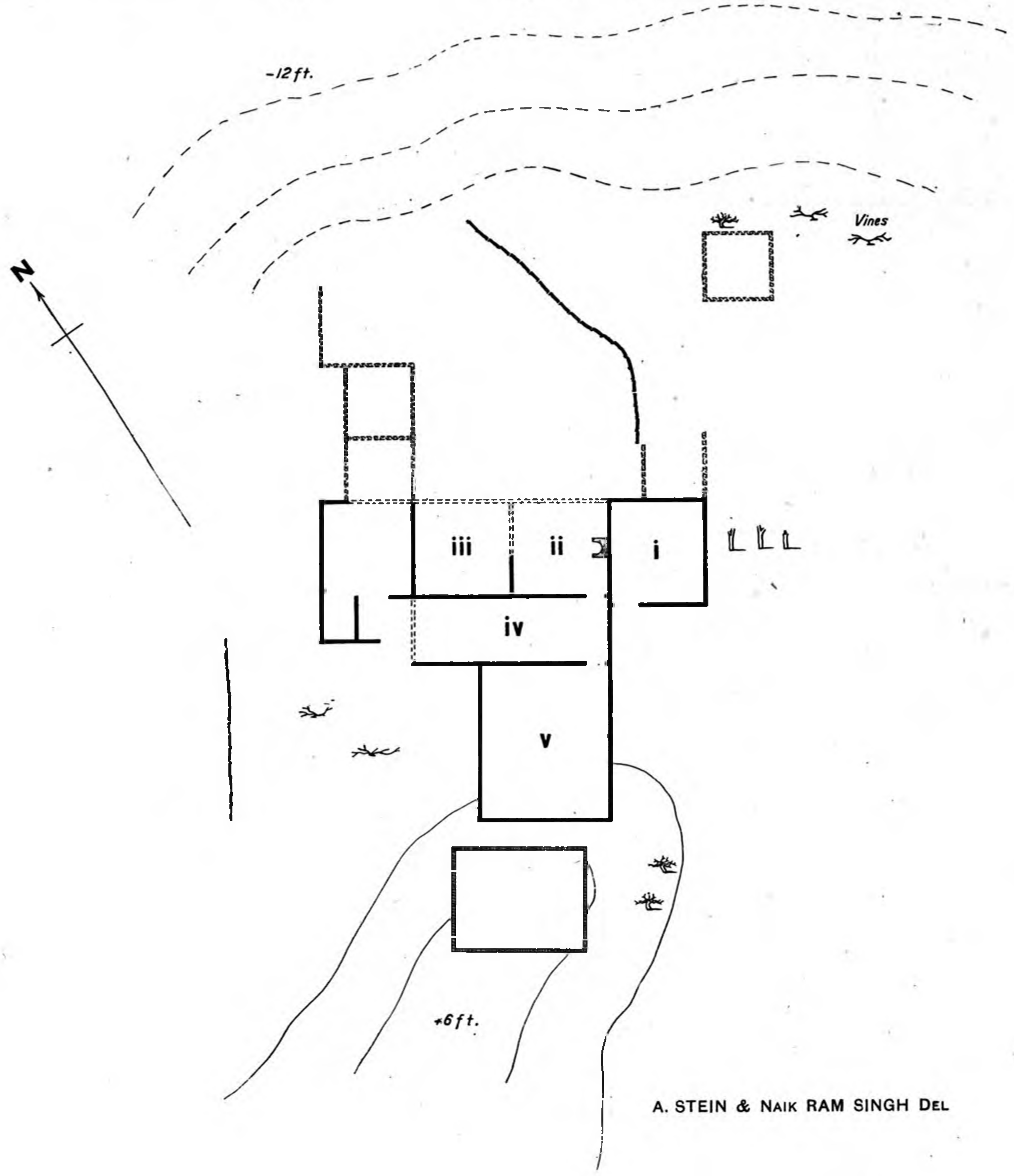
A. STEIN DEL.

PLAN
OF
ANCIENT RESIDENCE N.XXIX, NIYA SITE.

SCALE

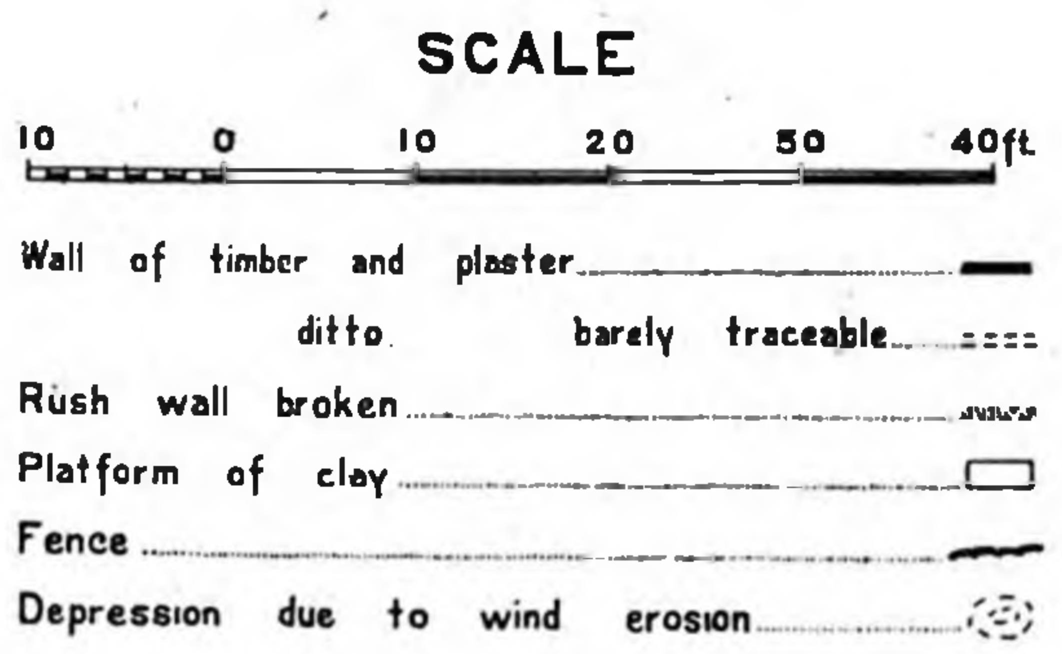
10 0 10 20 30 40 ft.

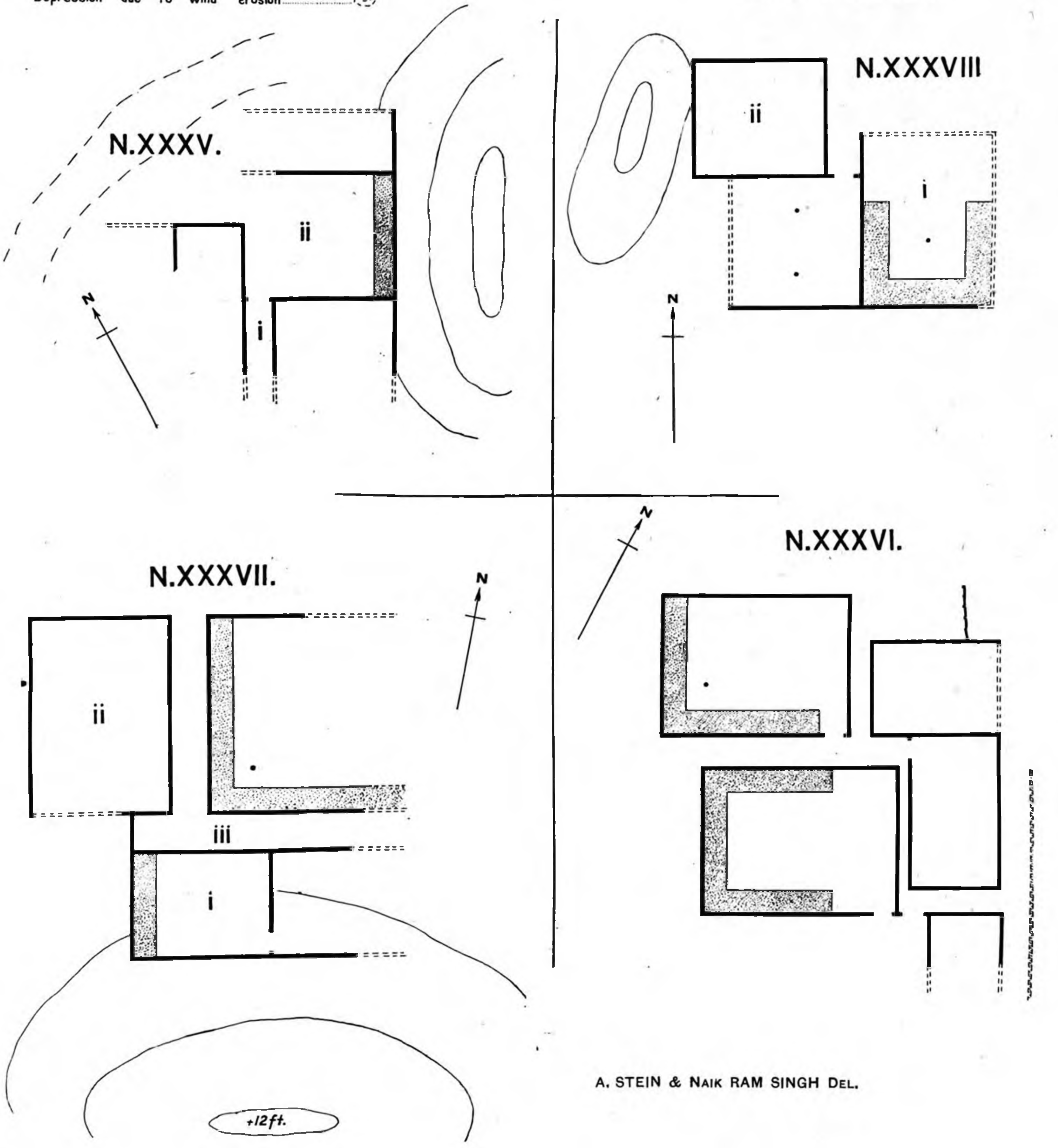
Wall of timber and plaster
ditto barely traceable
Rush wall
ditto broken
Fireplace of clay
Ancient fruit tree
ditto poplar tree
Fence
Depression due to wind erosion



A. STEIN & NAIK RAM SINGH DEL

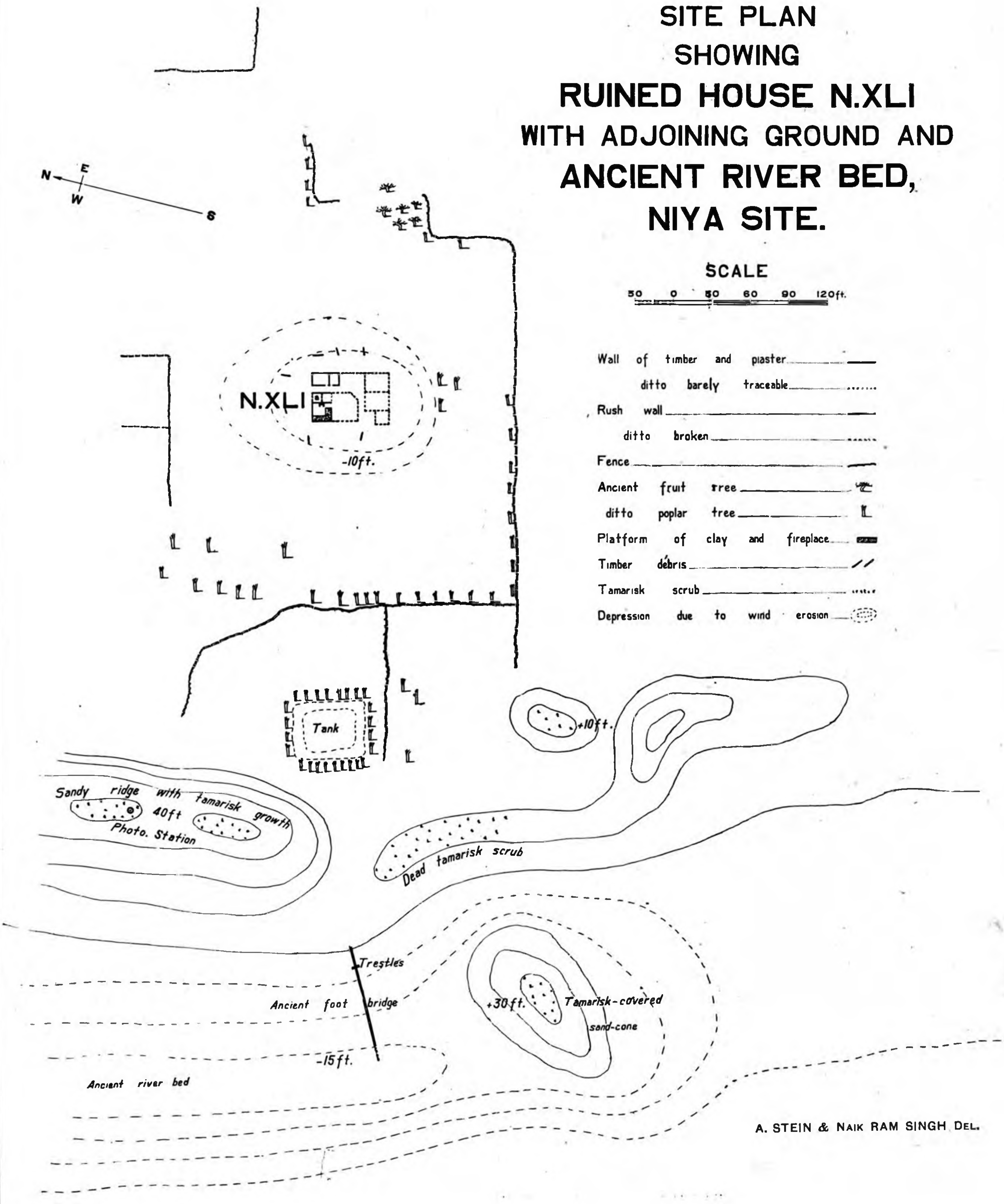
PLANS
OF
ANCIENT DWELLINGS,
N.XXXV, XXXVI, XXXVII, XXXVIII,
NIYA SITE.





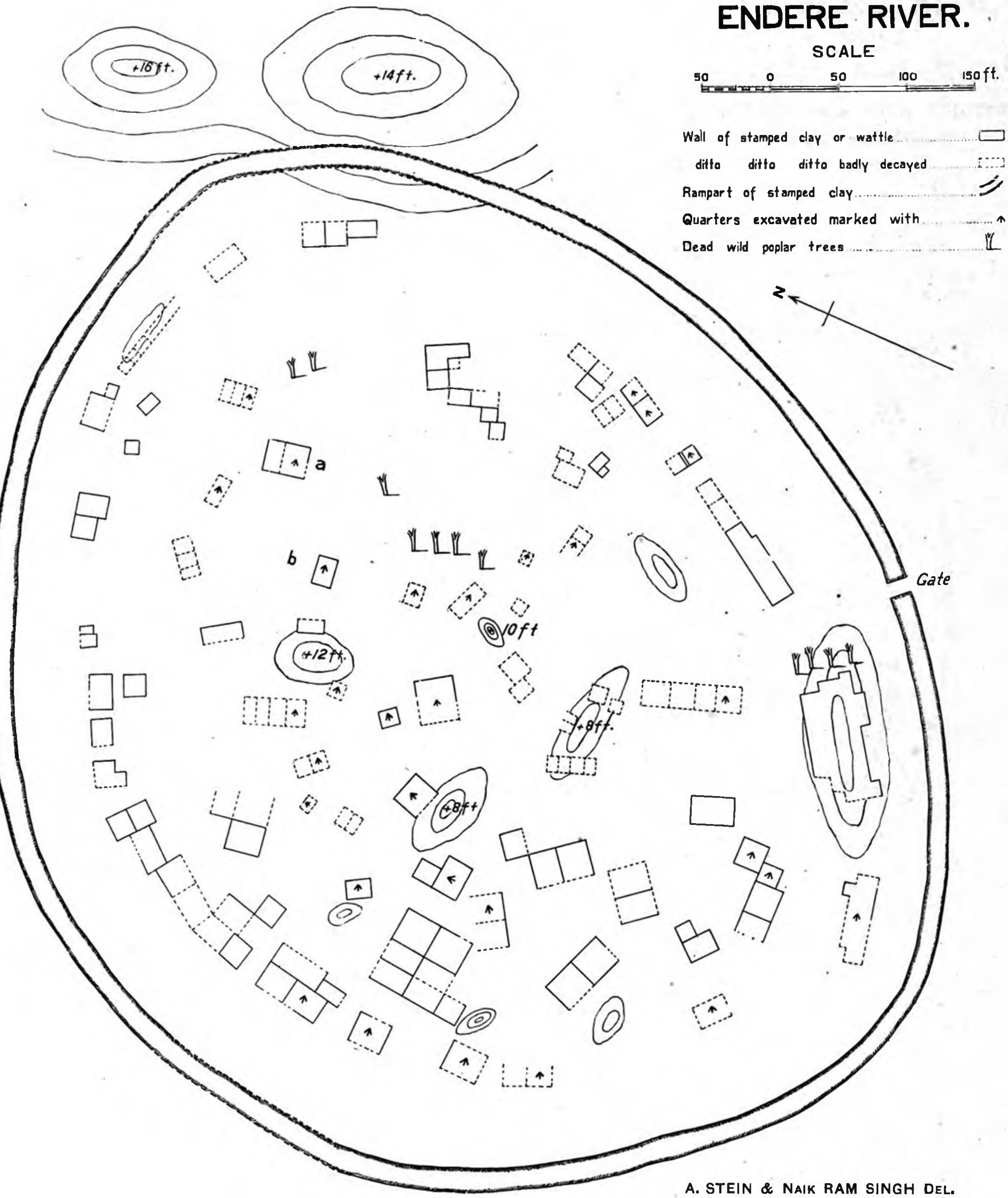
A. STEIN & NAIK RAM SINGH DEL.

SITE PLAN SHOWING RUINED HOUSE N.XLI WITH ADJOINING GROUND AND ANCIENT RIVER BED, NIYA SITE.



A. STEIN & NAIK RAM SINGH DEL.

PLAN OF RUINED VILLAGE, BILĒL-KONGHAN, NEAR ENDERE RIVER.



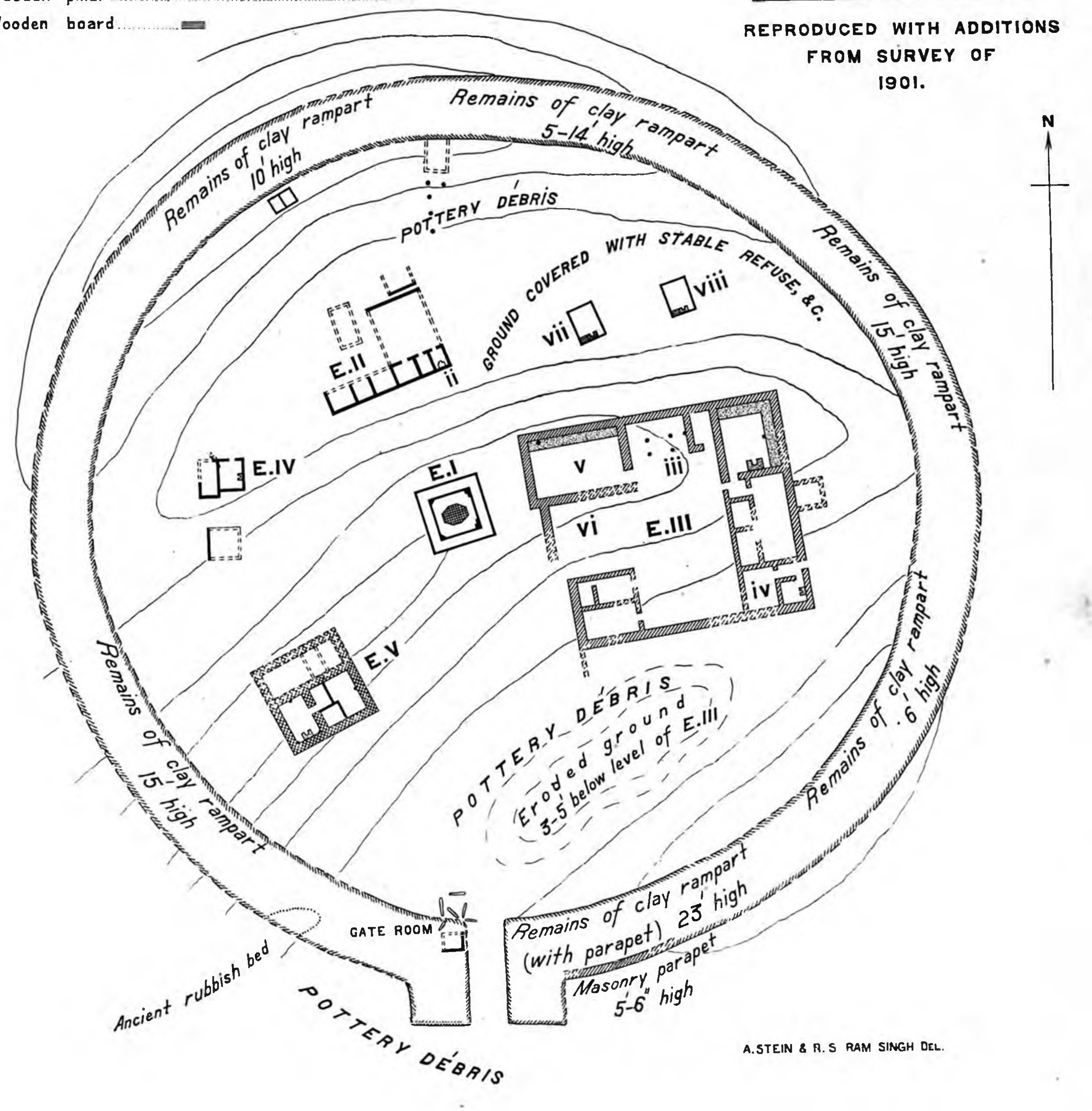
A. STEIN & NAIK RAM SINGH DEL.

Masonry of sun-dried bricks
ditto ditto ruined
Wall of timber and plaster
ditto ditto barely traceable
Wall of stamped clay
ditto ditto ruined
Rampart of stamped clay
Statue base of plaster
Raised platform (fireplace)
Wooden pillar
Wooden board

PLAN
OF
RUINED FORT
OF
T'ANG PERIOD,
ENDERE SITE.

SCALE
20 0 20 40 60 80 100 ft.

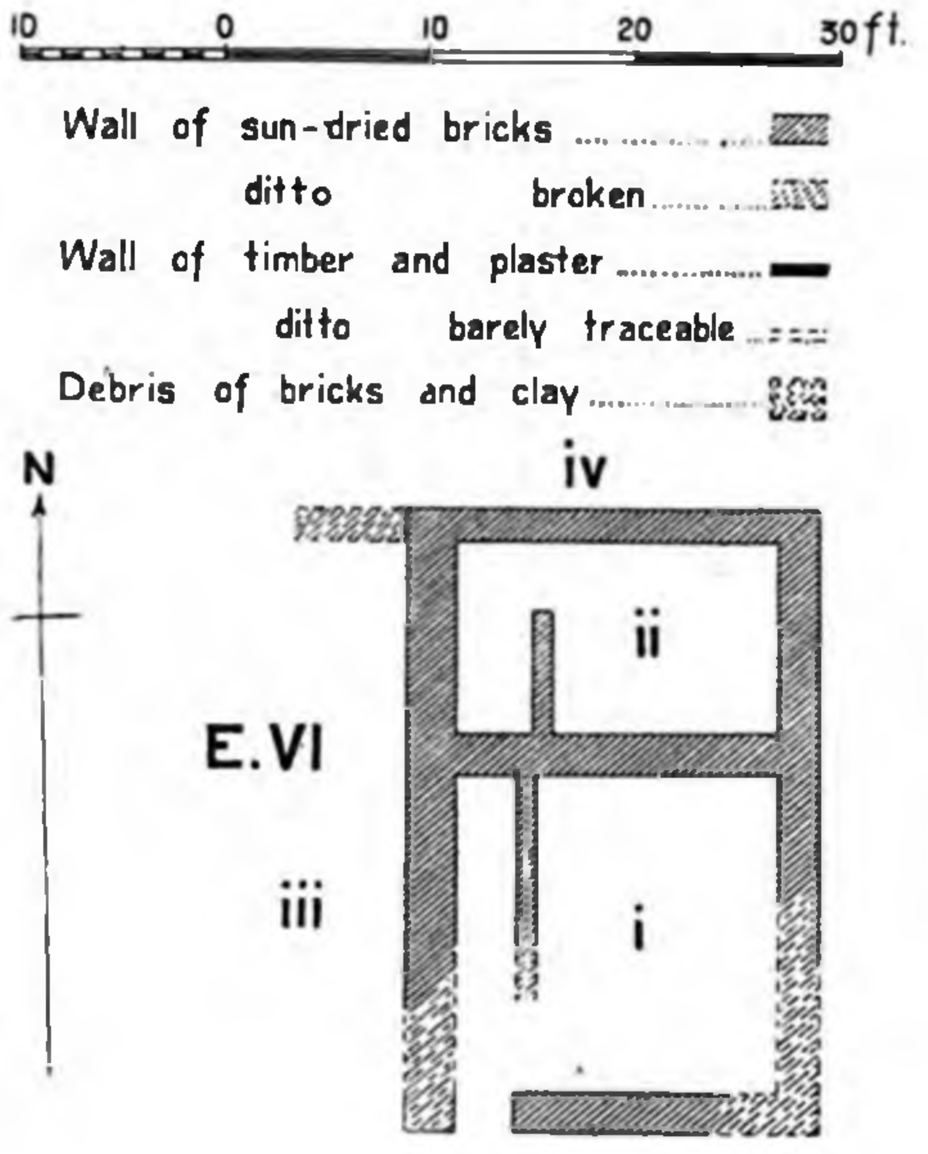
REPRODUCED WITH ADDITIONS FROM SURVEY OF 1901.

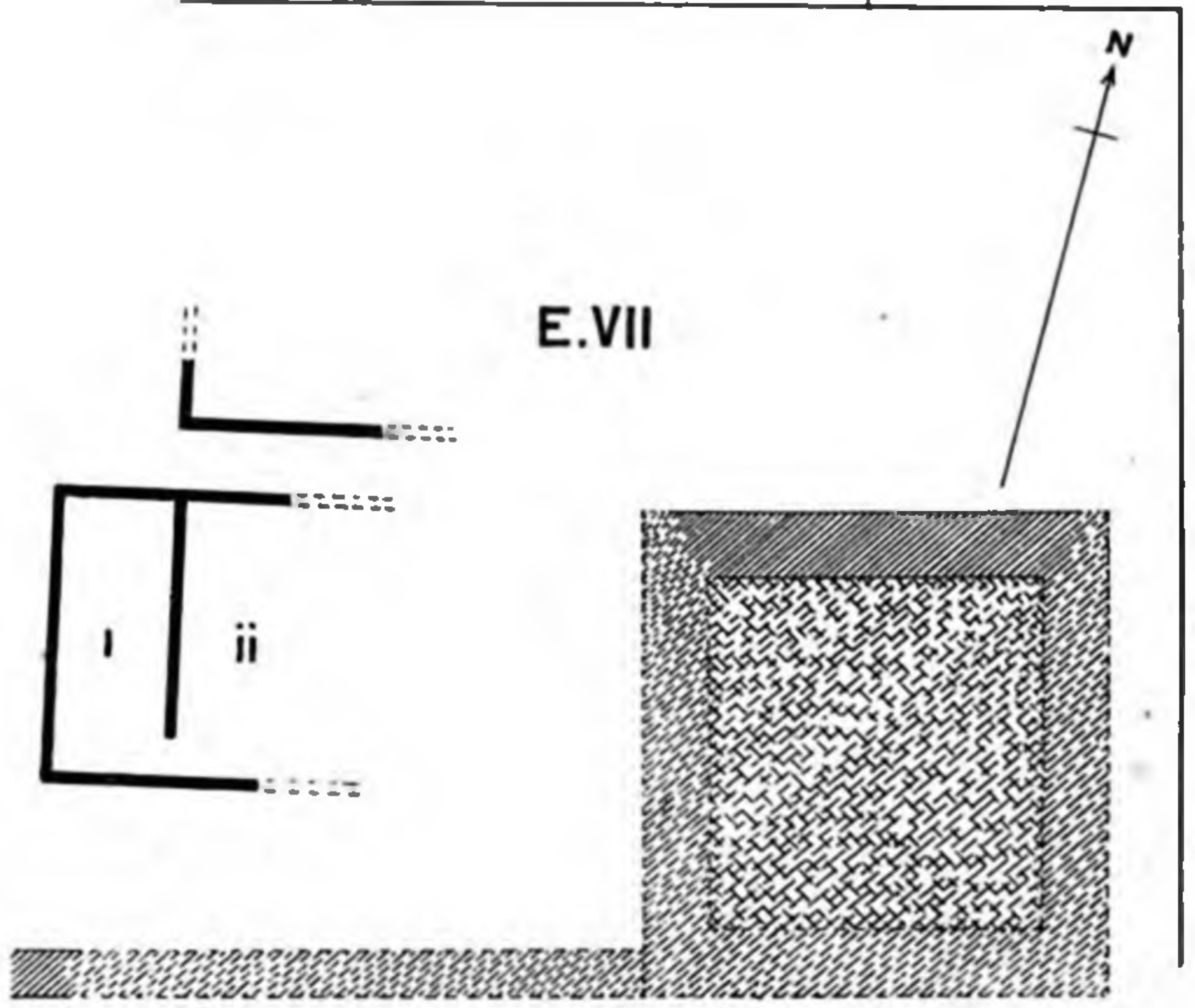


A. STEIN & R. S. RAM SINGH DEL.

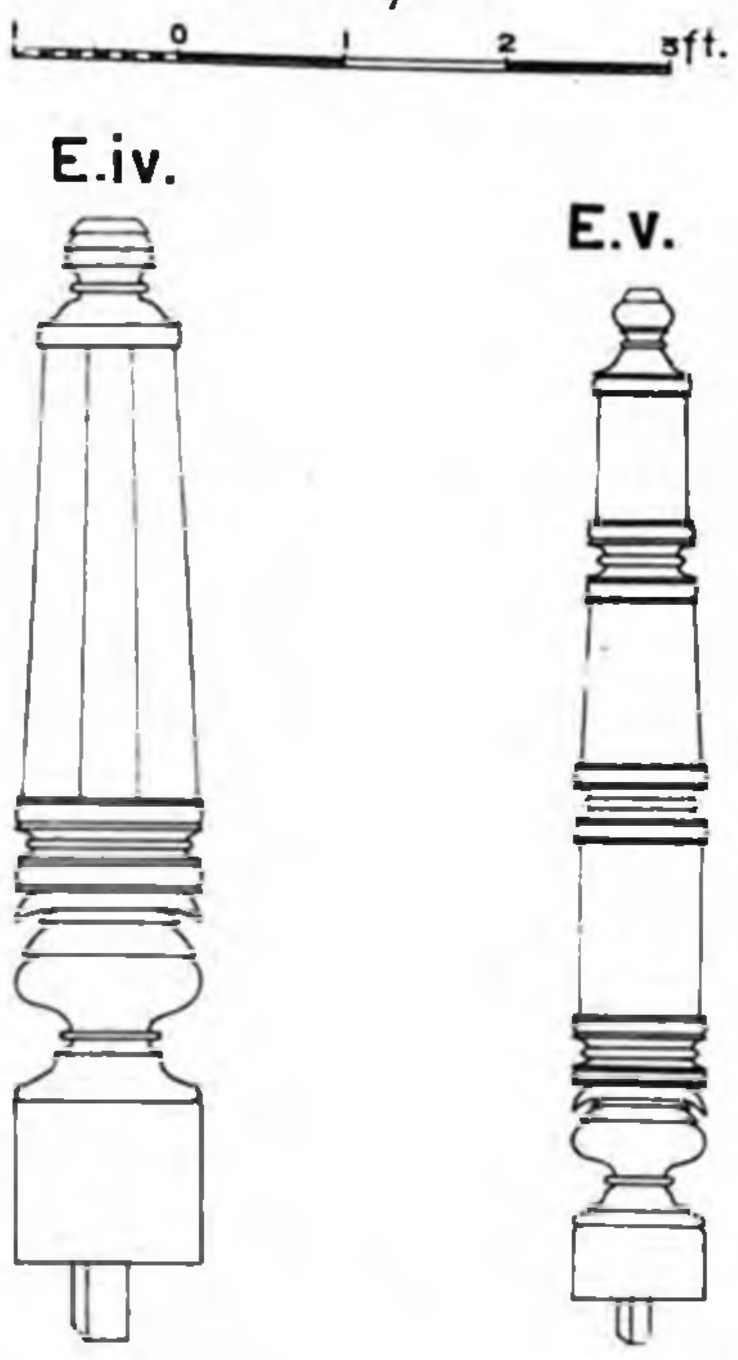
PLANS OF RUINED STRUCTURES AT ENDERE SITE.

SCALE

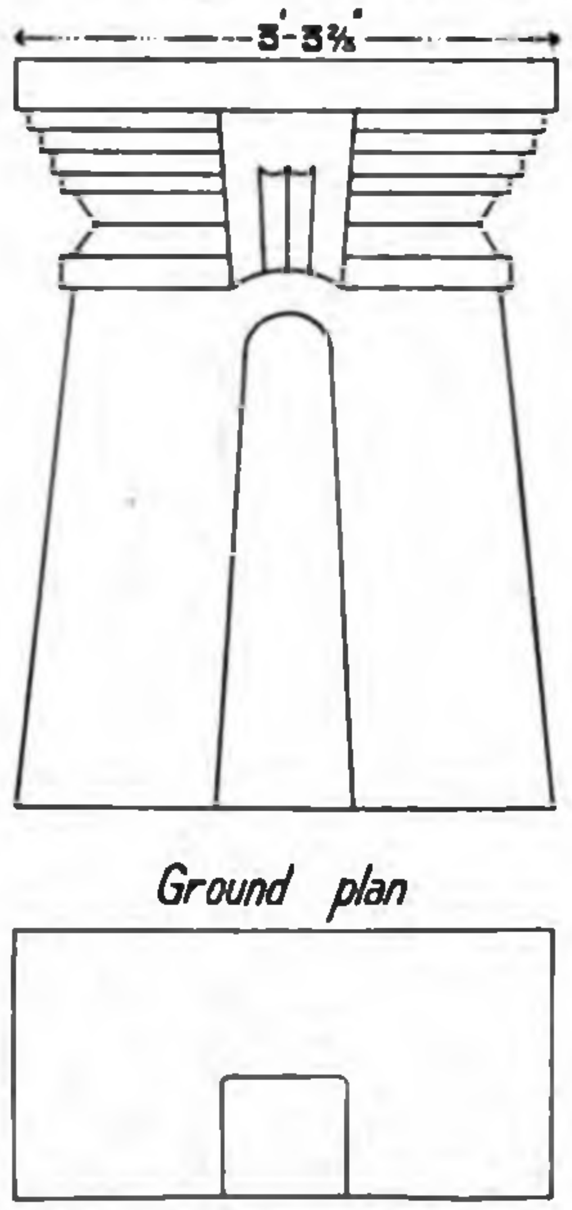




Elevations of wooden pillars

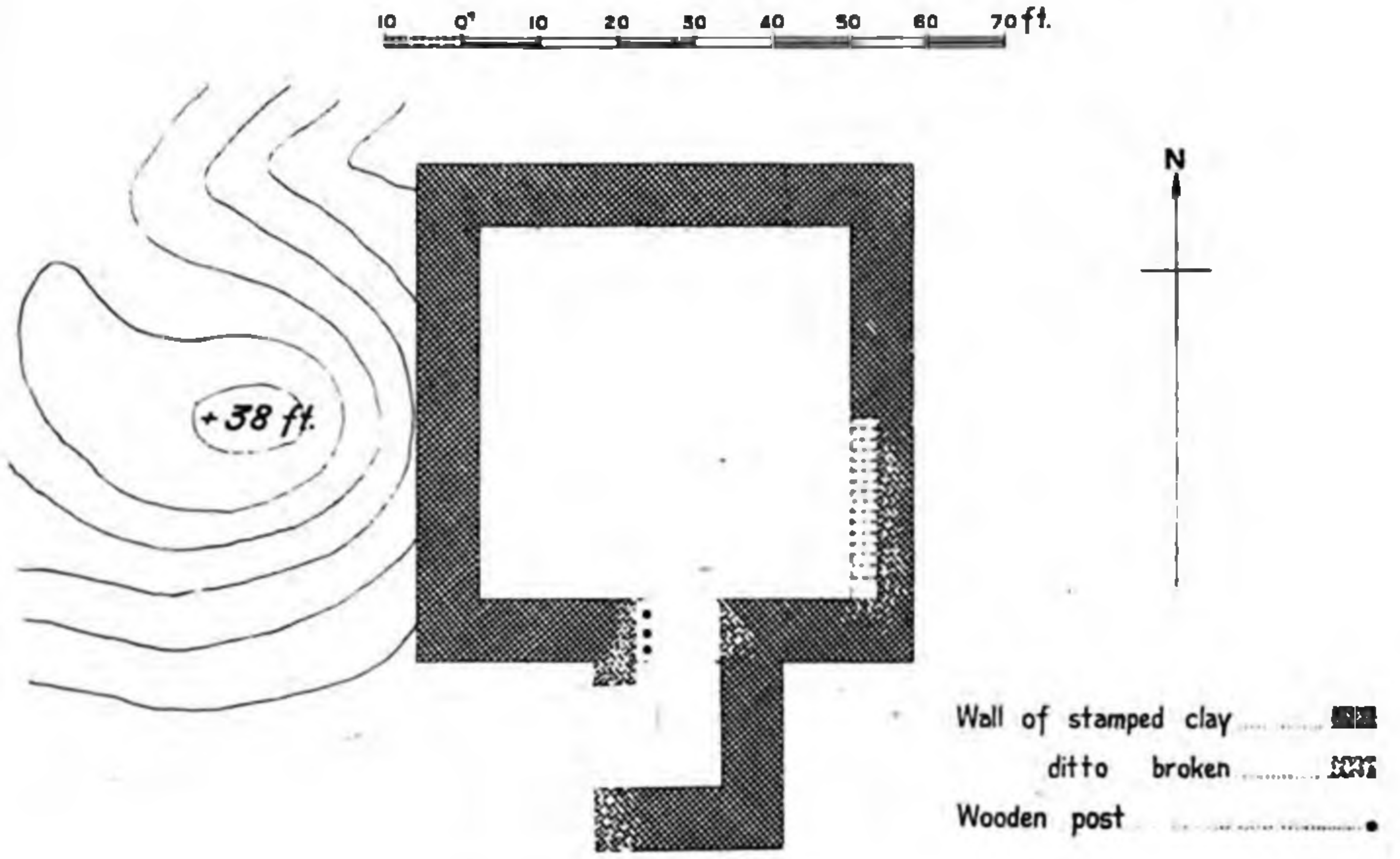


Elevation of fire place in clay, room E.viii.



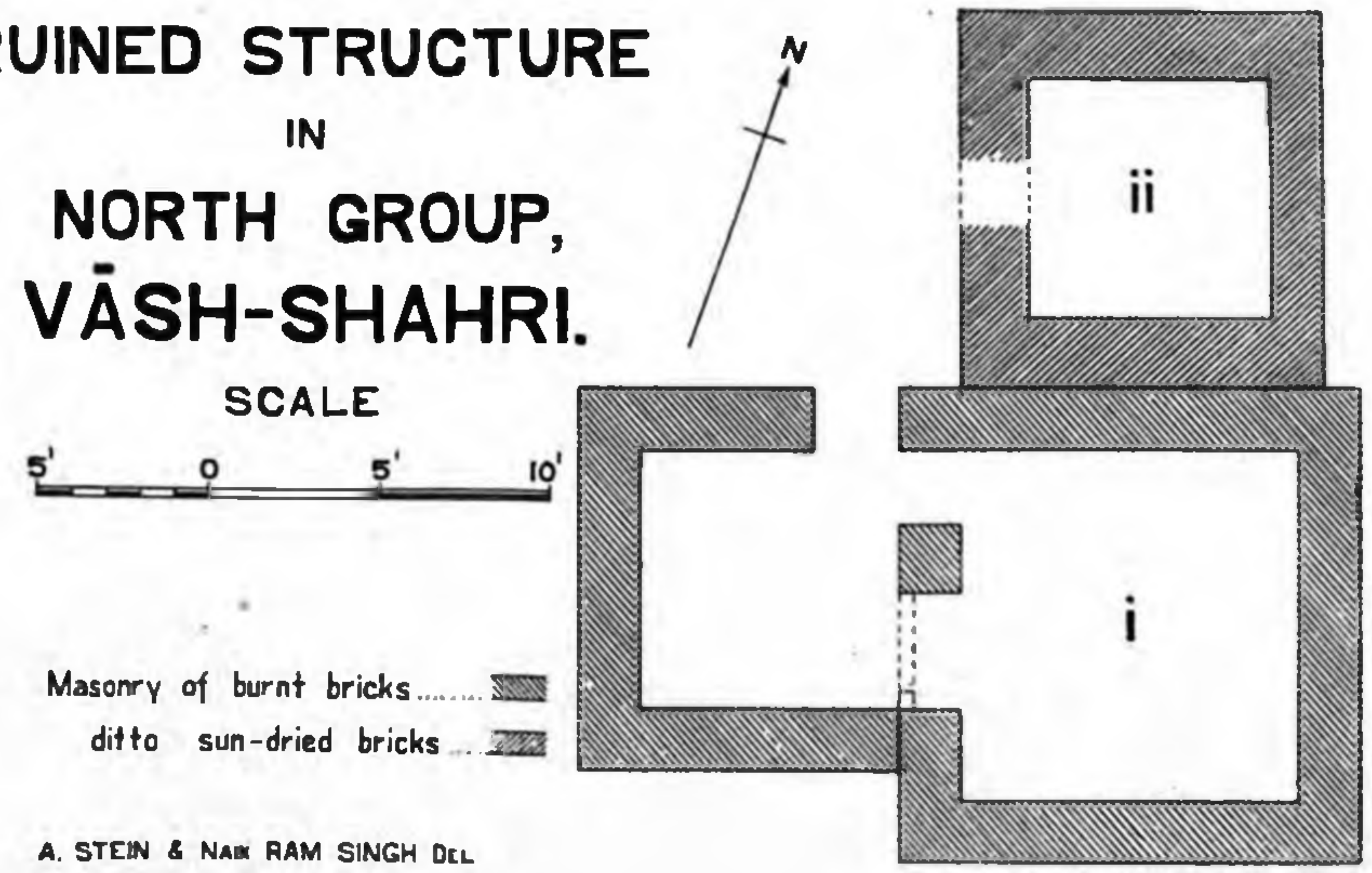
PLAN OF RUINED FORT, S. OF ENDERE SITE.

SCALE



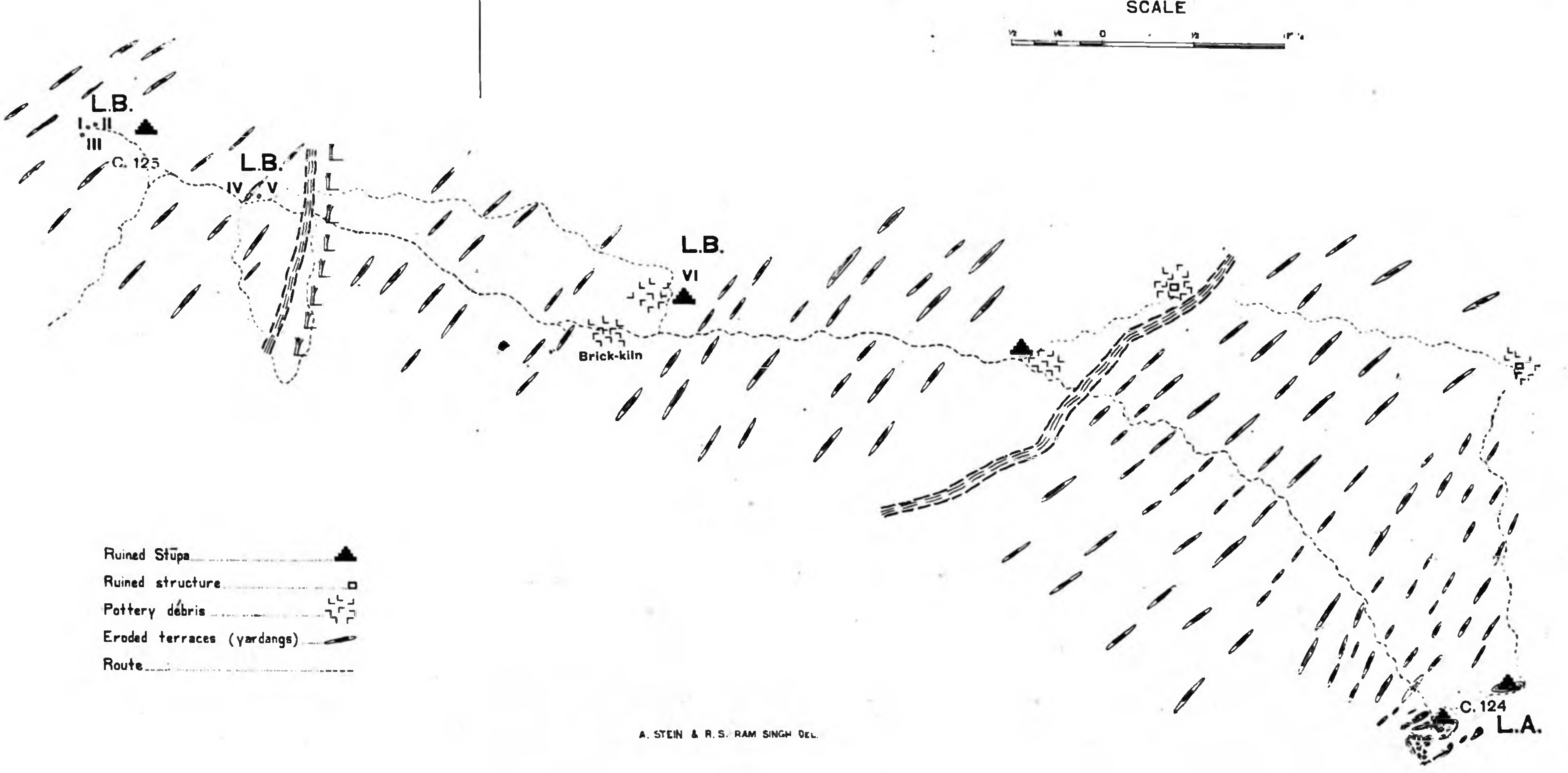
PLAN OF RUINED STRUCTURE IN NORTH GROUP, VĀSH-SHAHRI.

SCALE



A. STEIN & NAIK RAM SINGH DEL.

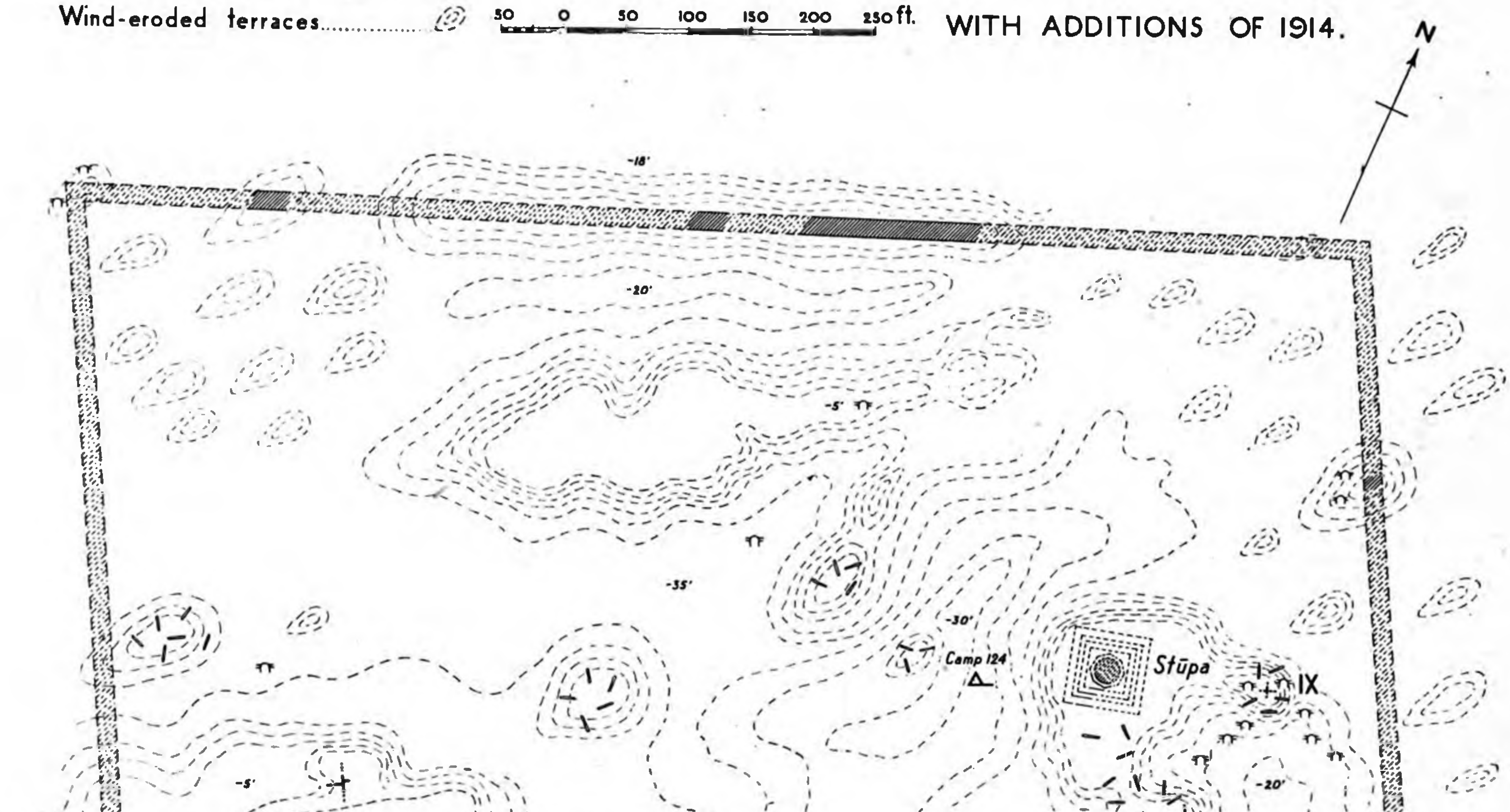
SITE PLAN OF RUINED SITES L.A. AND L.B., LOU-LAN.



SITE PLAN
OF
RUINED STATION, L.A., LOU-LAN SITE,
WITH ADDITIONS OF 1914.

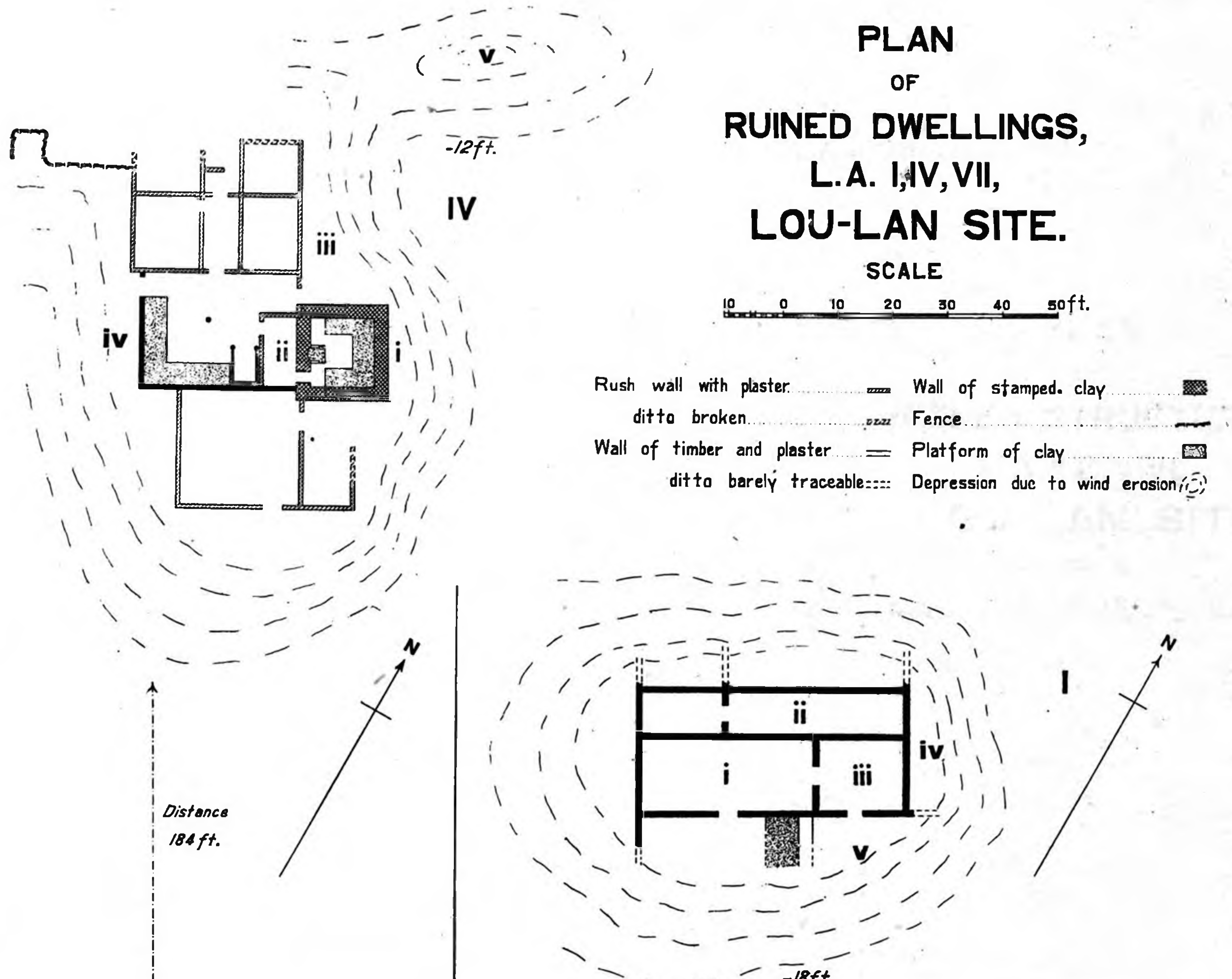
Stamped clay wall
do. do. do. effaced
Brick wall
Timber & plaster wall
Fence of rushes
Building badly eroded
Timber débris
Refuse layer
Wind-eroded terraces

SCALE
50 0 50 100 150 200 250 ft.



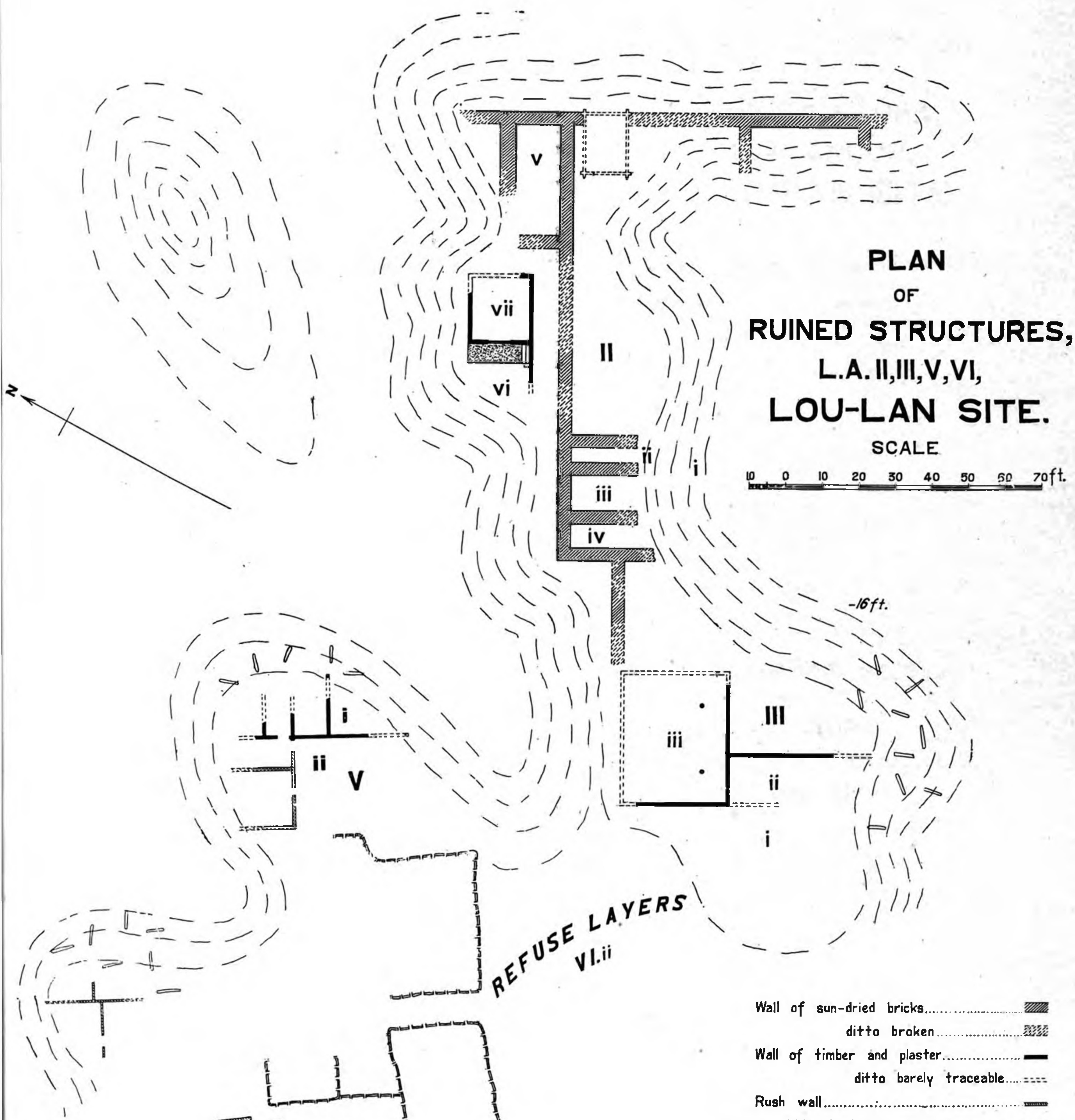
A. STEIN & AFRAZGUL KHAN DEL.

PLAN
OF
RUINED DWELLINGS, L.A. I, IV, VII, LOU-LAN SITE.



A. STEIN & NAIK RAM SINGH DEL.

PLAN OF RUINED STRUCTURES, L.A. II, III, V, VI, LOU-LAN SITE.



A. STEIN & NAIK RAM SINGH DEL.

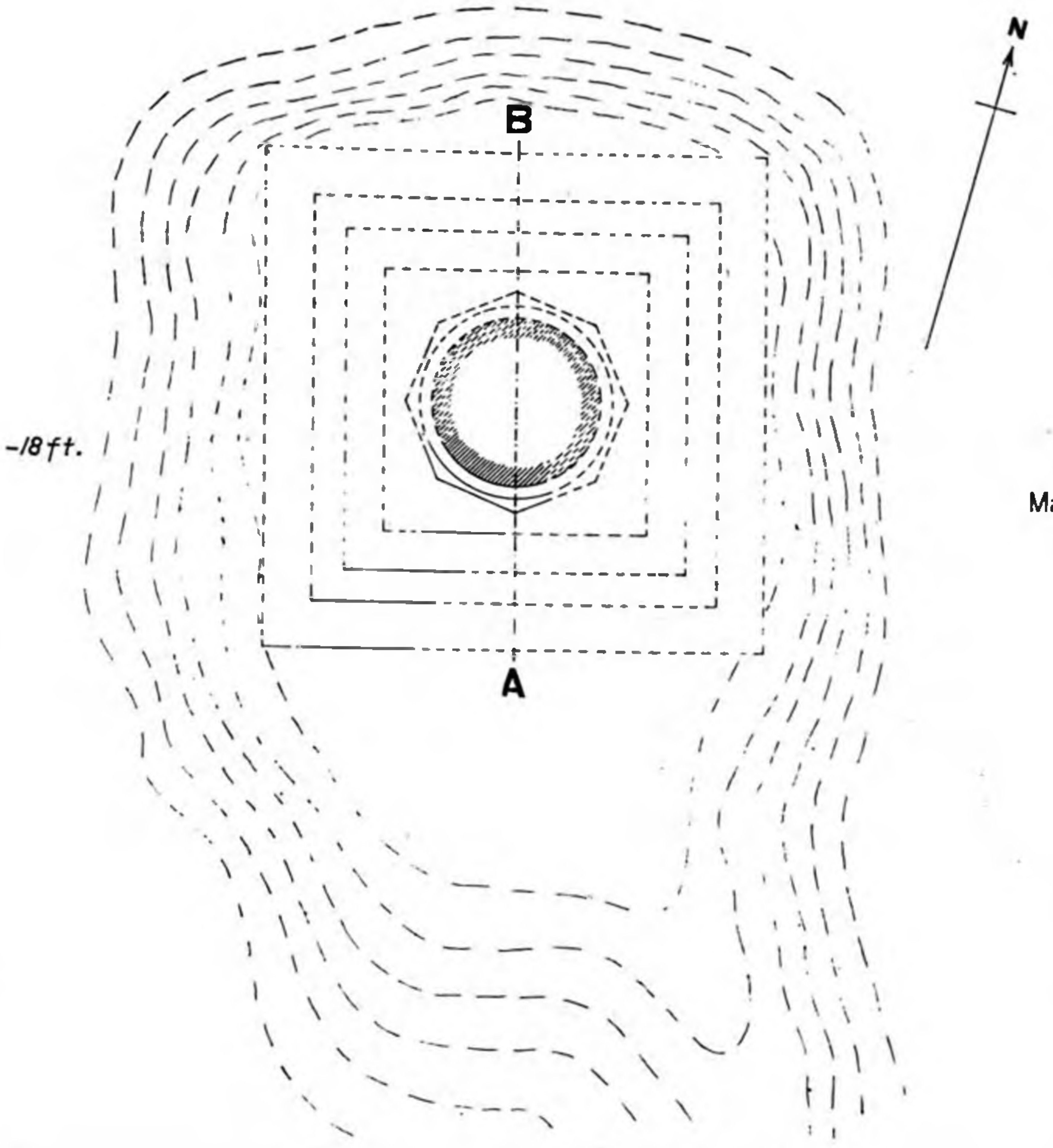
PLAN AND SECTION OF RUINED STŪPA, L.A. GROUP, LOU-LAN SITE.

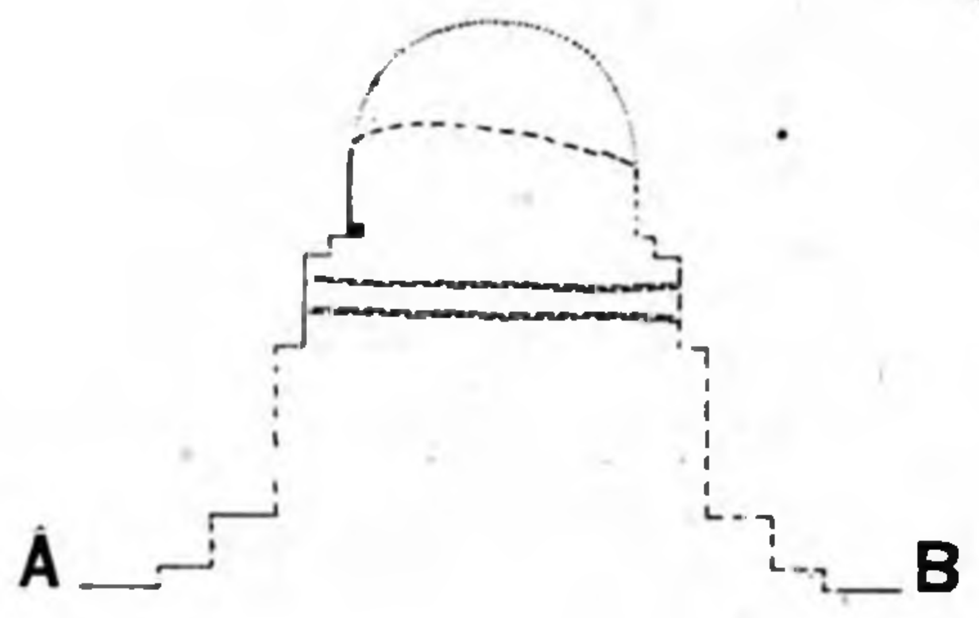
SCALE

10 0 10 20 30 40 50 ft.

Masonry, intact ——— Brushwood layer

ditto broken - - - - Conjectured outline ....





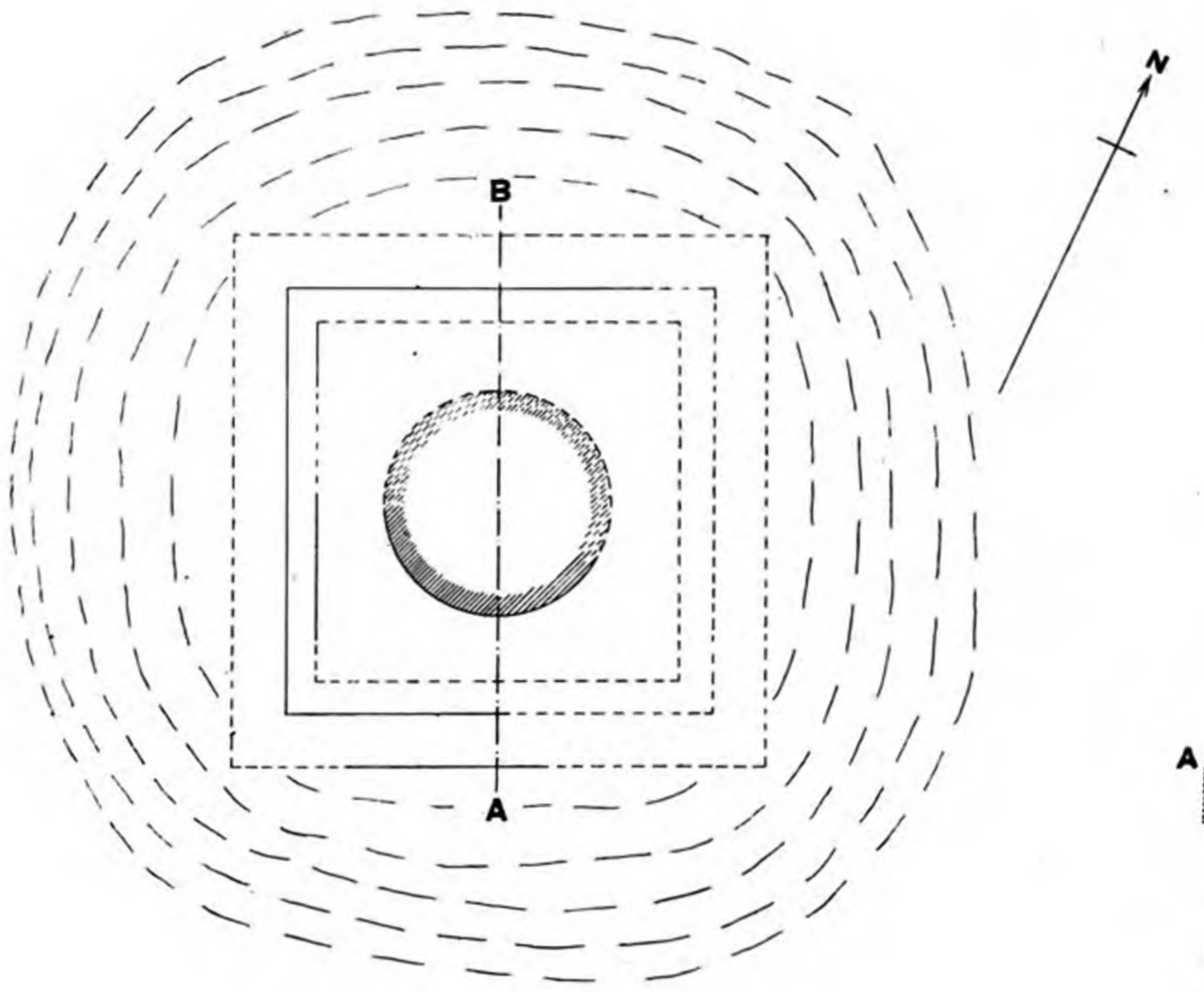
SKETCH PLAN AND SECTION OF RUINED STŪPA BETWEEN GROUPS L.A. AND L.B., 'LOU-LAN' SITE.

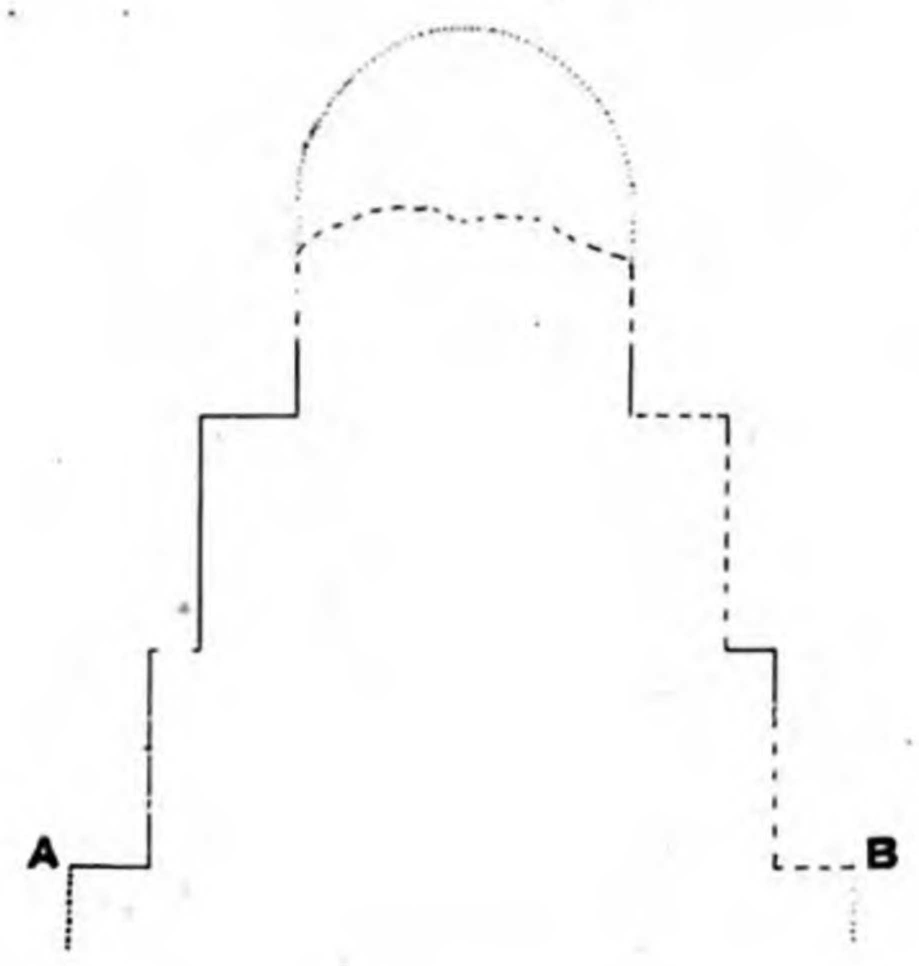
SCALE

10 5 0 10 20 30 ft.

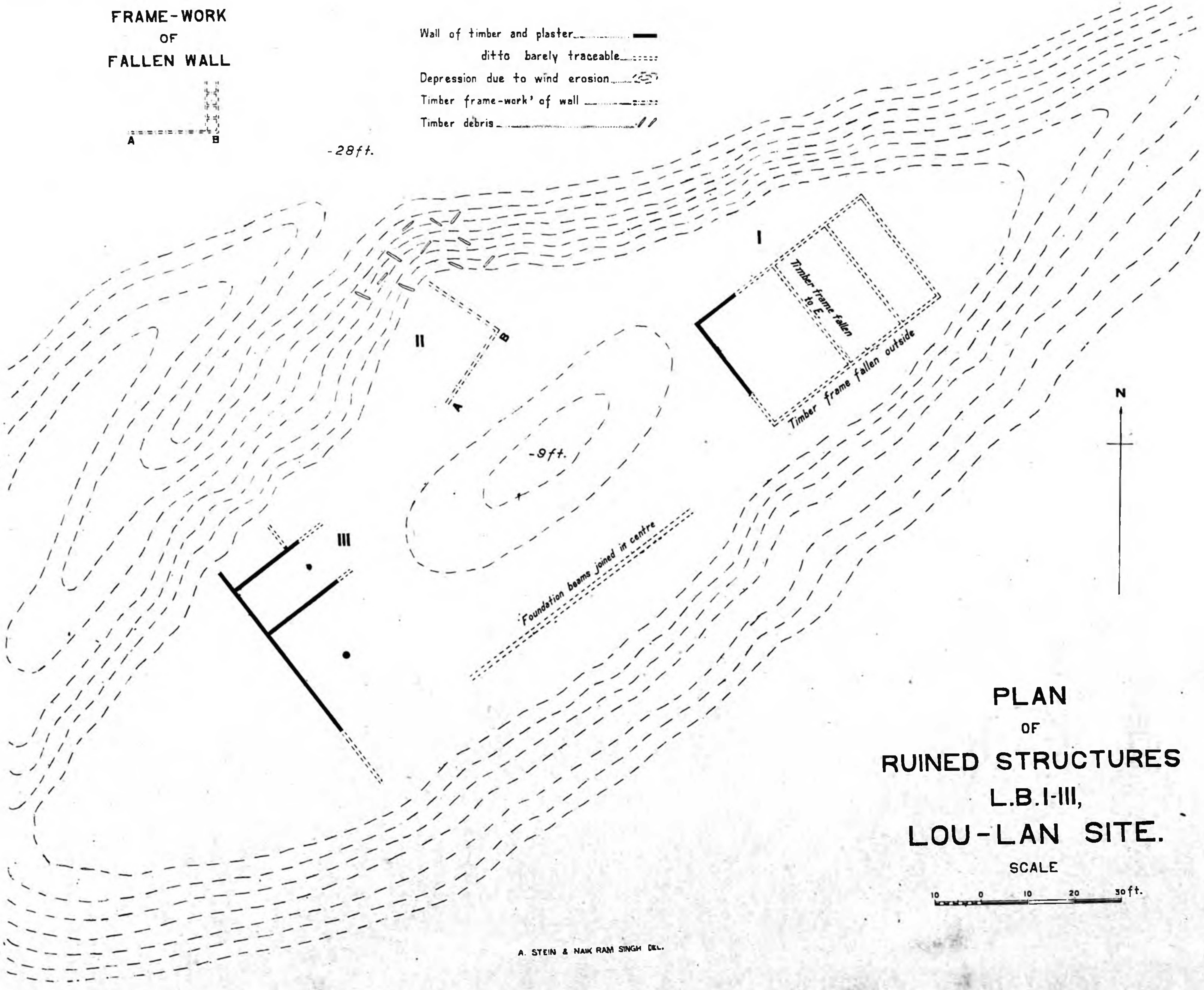
Masonry intact ——— Conjectured outline ——

ditto broken - - - Depression due to wind erosion



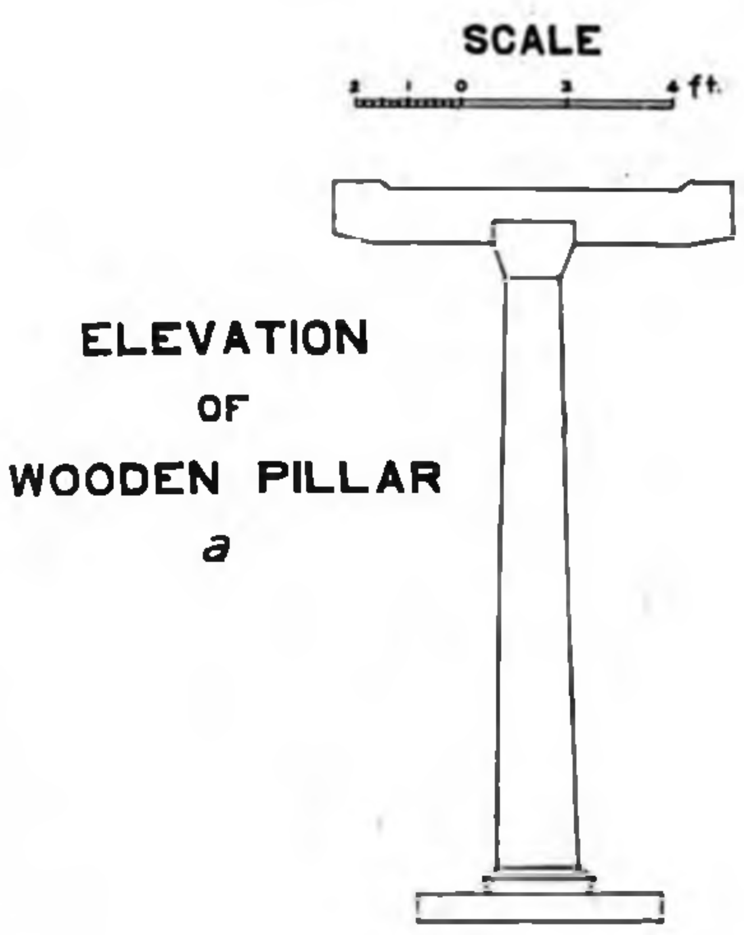


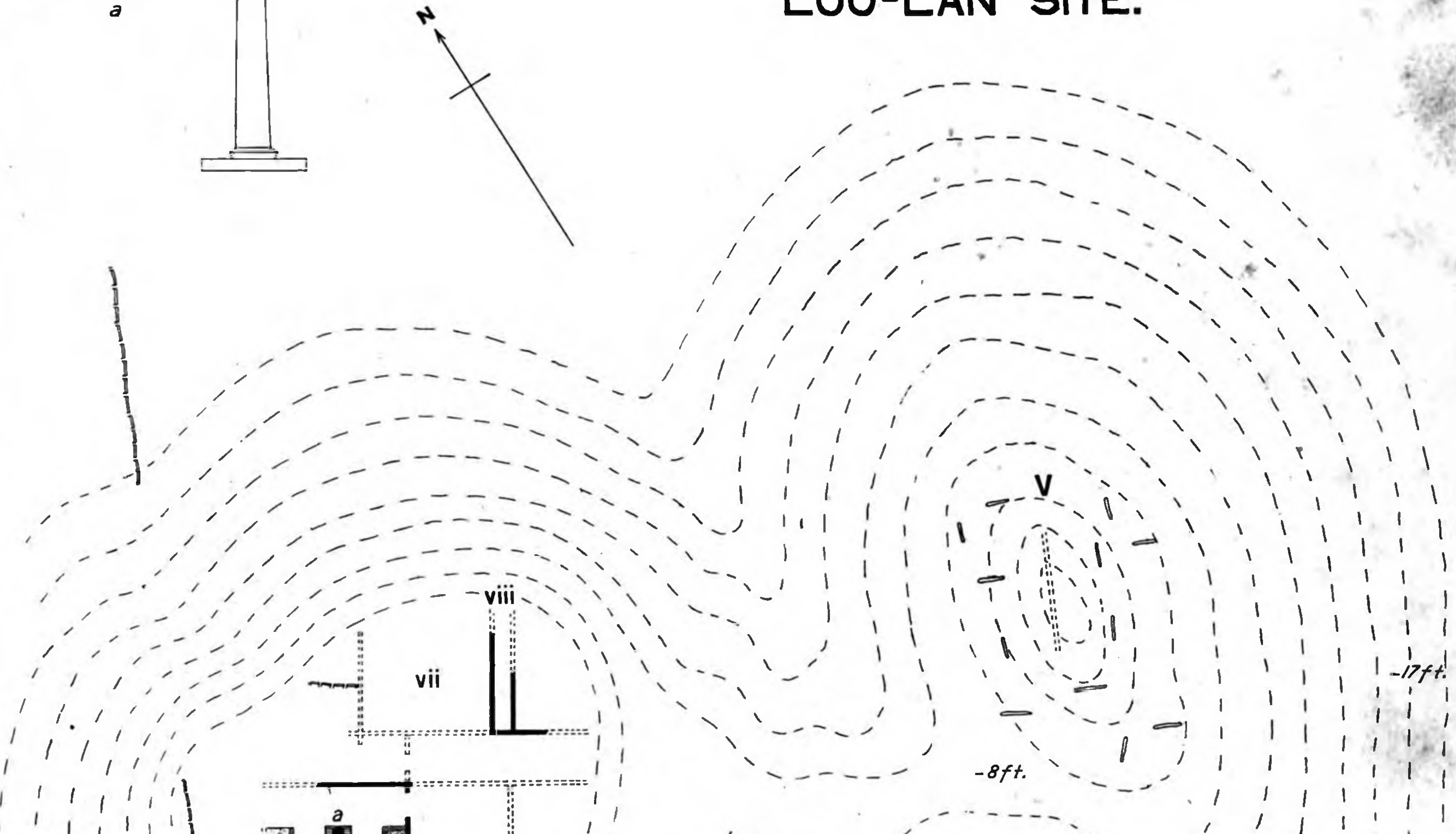
A. STEIN & NAIK RAM SINGH DEL.



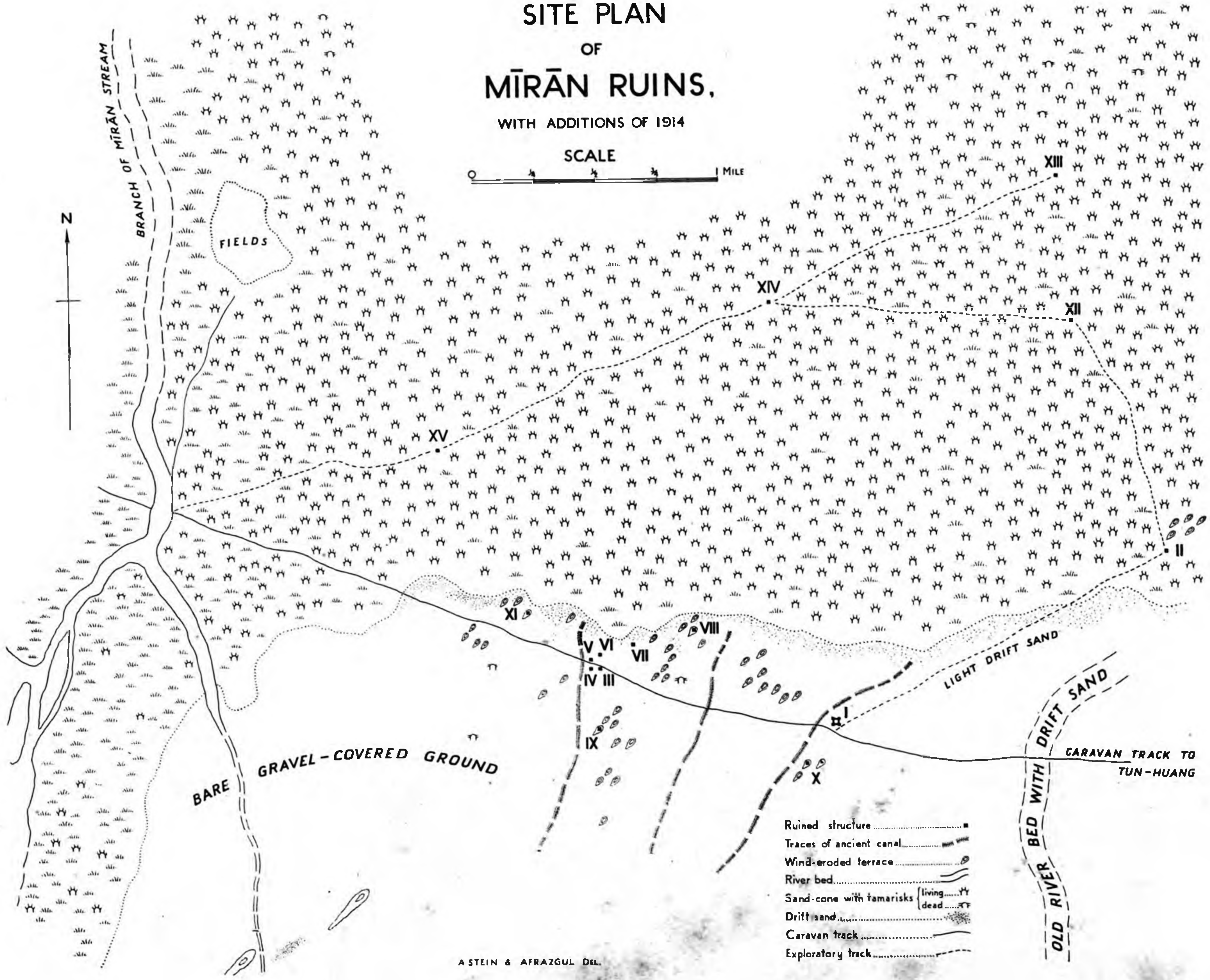
PLAN OF RUINED STRUCTURES L.B. I-III, LOU-LAN SITE.

PLAN OF RUINED HOUSES L.B.IV,V, LOU-LAN SITE.





A. STEIN & NAIK RAM SINGH DEL.


SITE PLAN
OF
MĪRĀN RUINS.
WITH ADDITIONS OF 1914
SCALE
0
1 MILE
N
BRANCH OF MĪRĀN STREAM
FIELDS
XIII
XIV
XII
XV
II
XI
VIII
V VI
VII
IV III
I
IX
X
LIGHT DRIFT SAND
OLD RIVER BED WITH DRIFT SAND
CARAVAN TRACK TO
TUN-HUANG
BARE GRAVEL-COVERED GROUND
Ruined structure
Traces of ancient canal
Wind-eroded terrace
River bed
Sand-cone with tamarisks
living
dead
Drift sand
Caravan track
Exploratory track
A. STEIN & AFRAZGUL DEL.

PLAN
OF
TIBETAN FORT, M.I, MĪRĀN.

SCALE

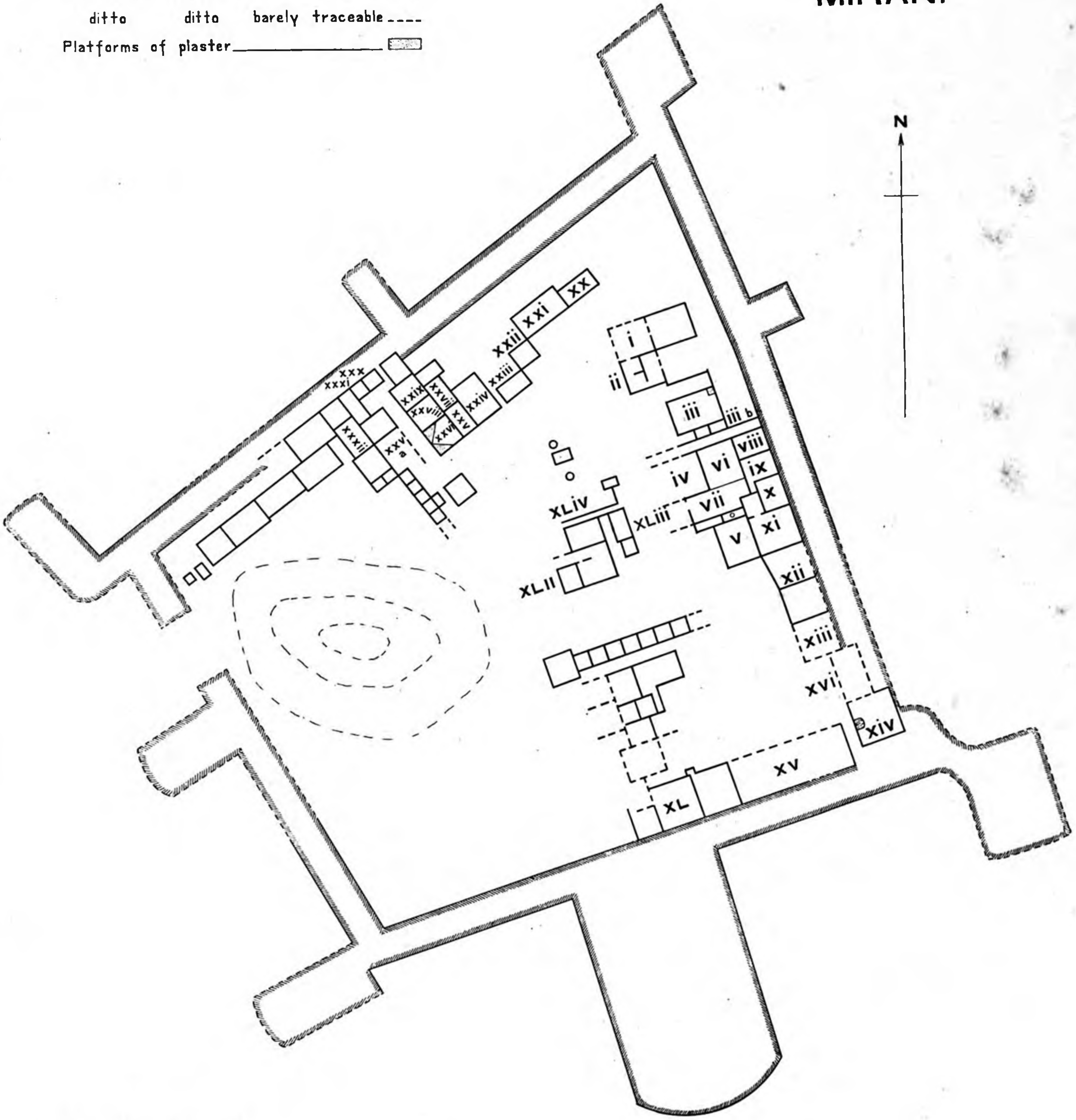
20 0 20 40 60 ft.

Fort wall of stamped clay

Walls of quarters and store rooms

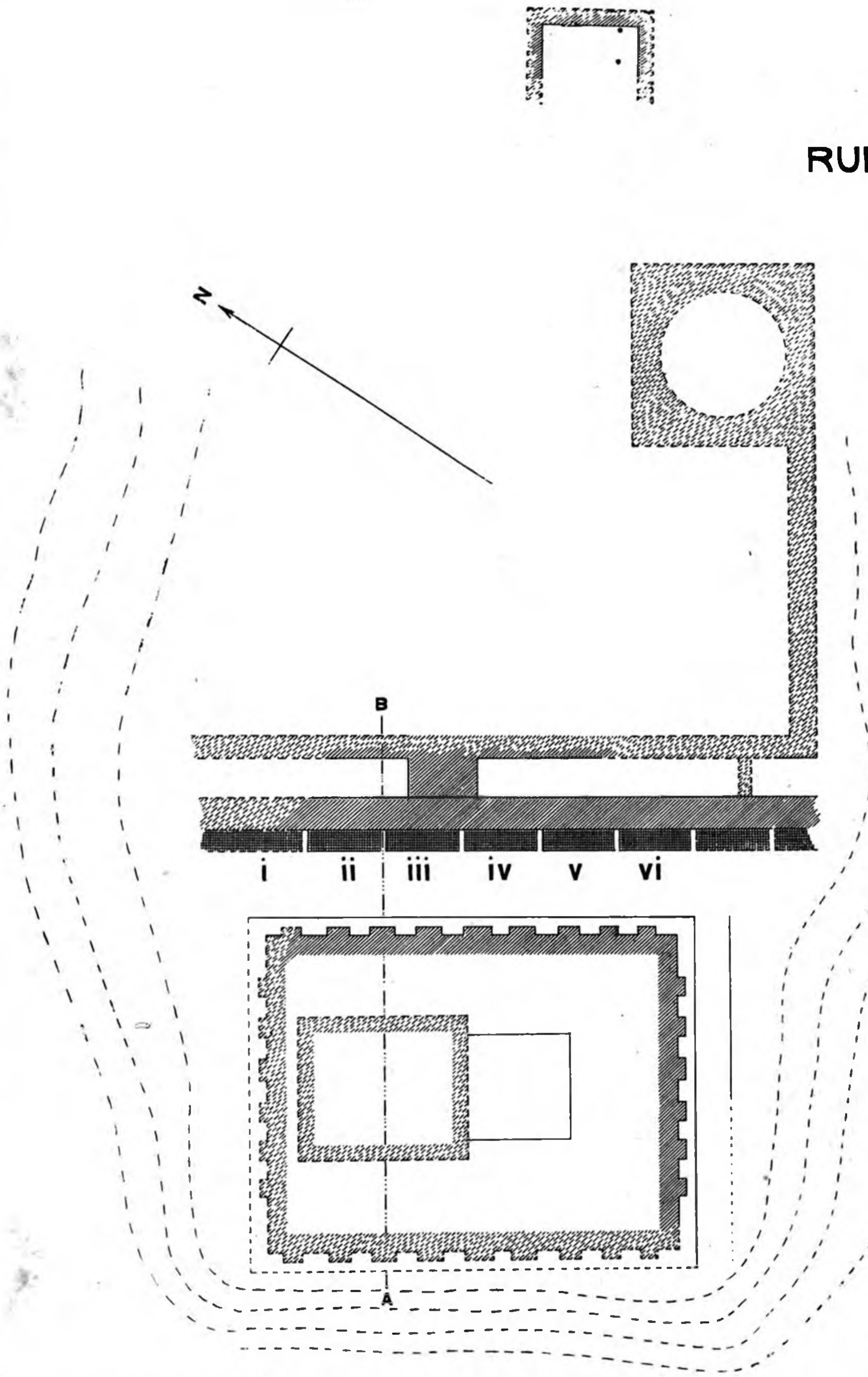
ditto ditto barely traceable

Platforms of plaster



A. STEIN & NAIK RAM SINGH DEL.

PLAN
OF
RUINED TEMPLE
M.II,
MĪRĀN.



SCALE

10 0 10 20 ft.

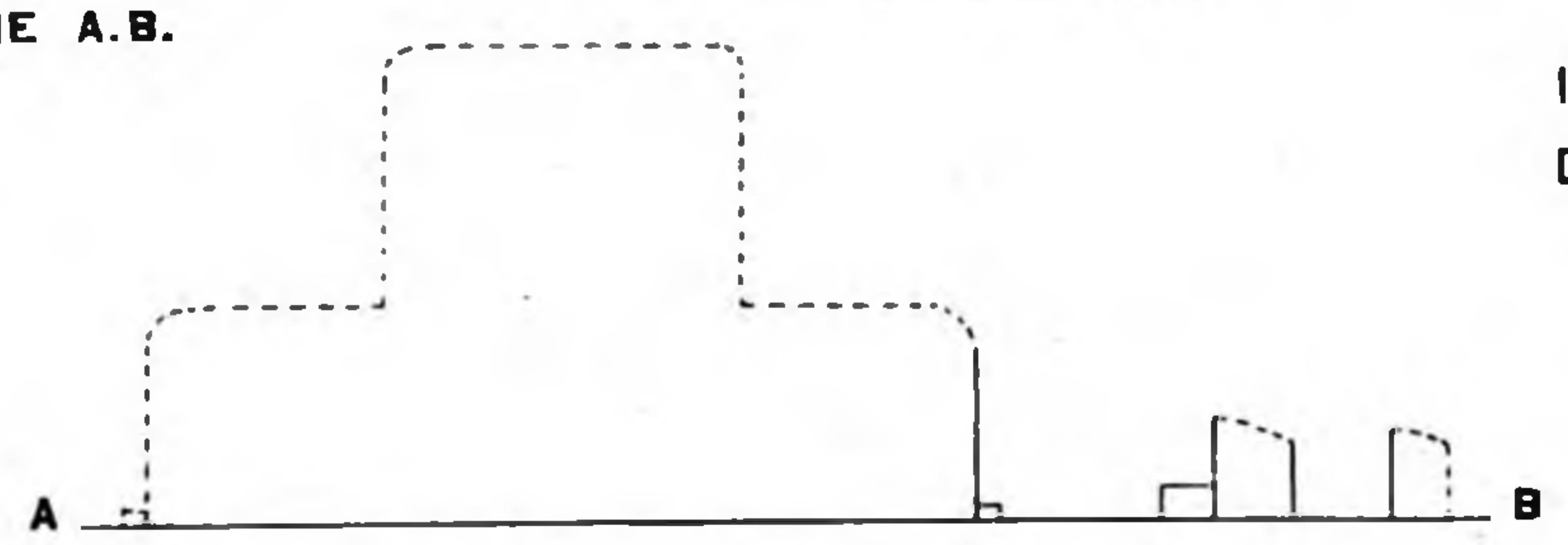
Masonry of sun-dried bricks

ditto broken

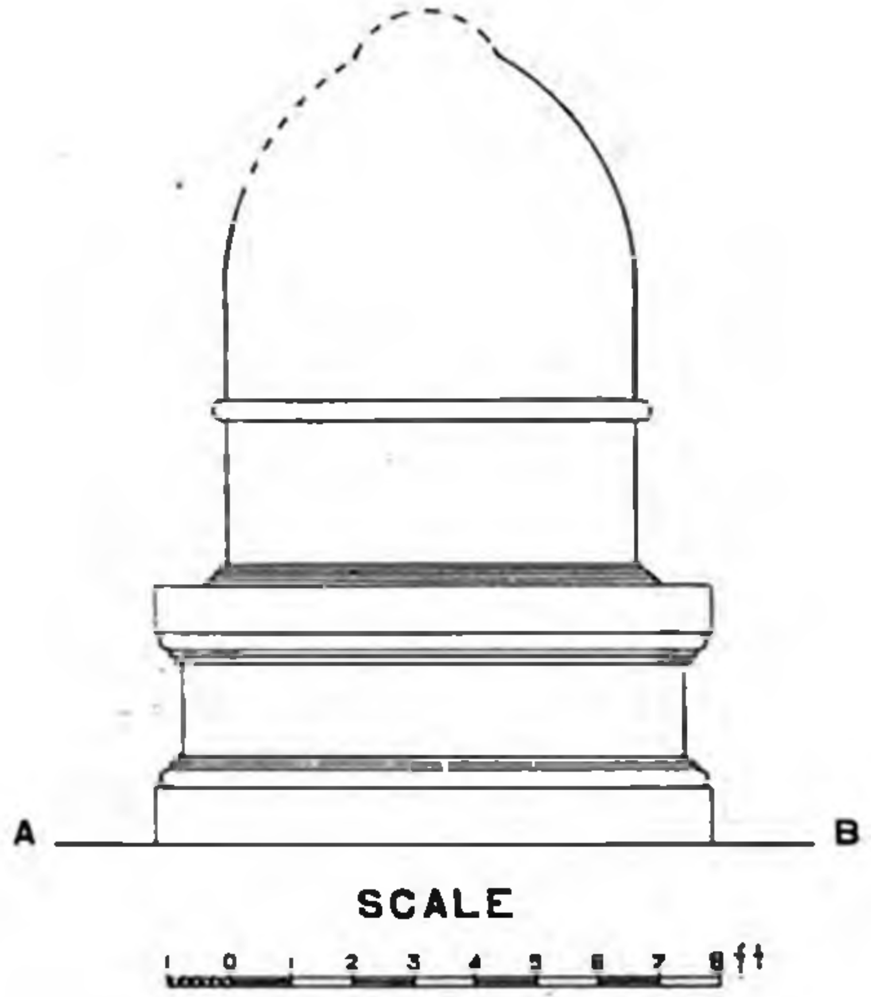
Image base, plastered

Depression due to wind erosion

SECTION ON LINE A.B.



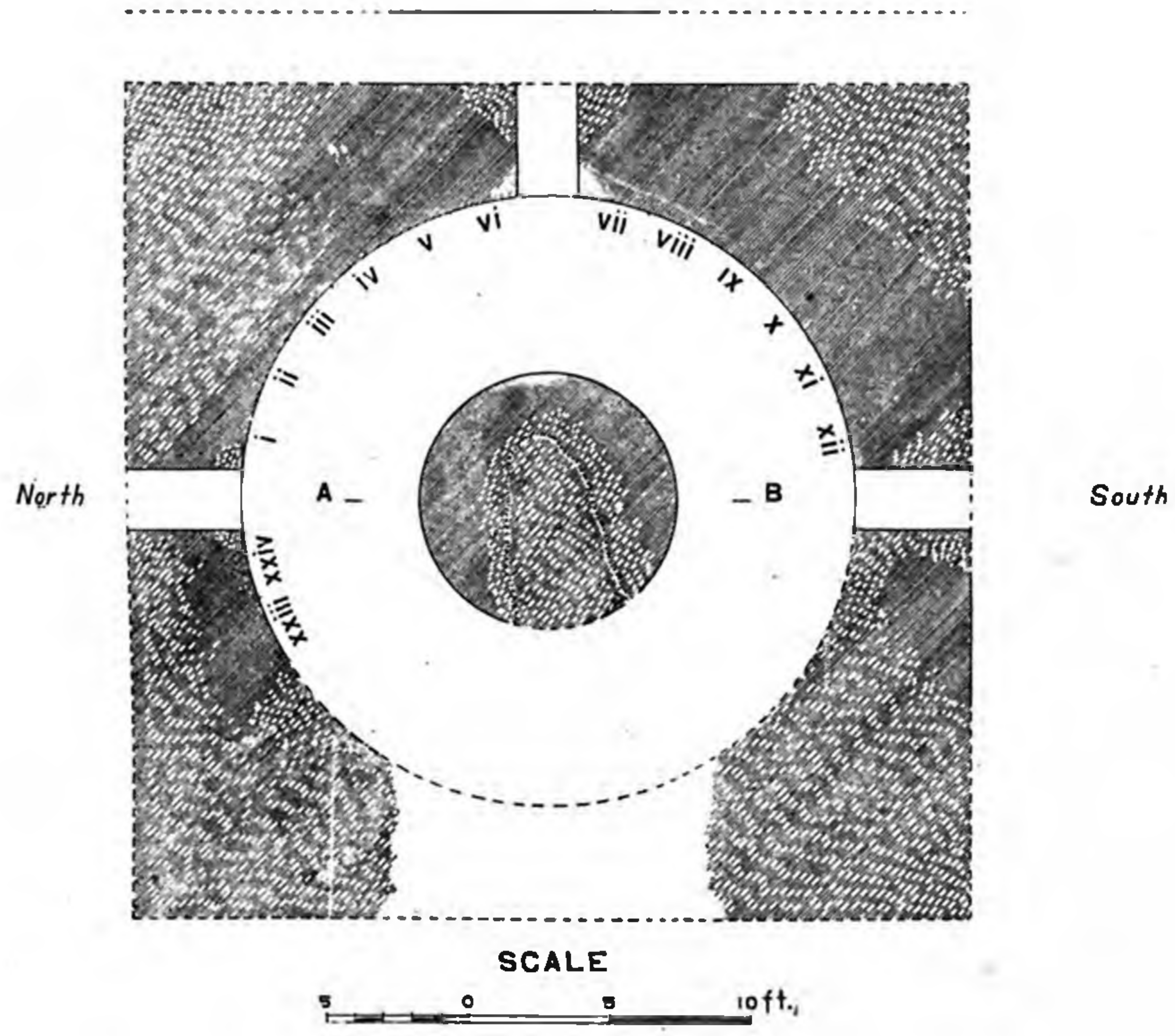
A. STEIN & NAIK RAM SINGH DEL.

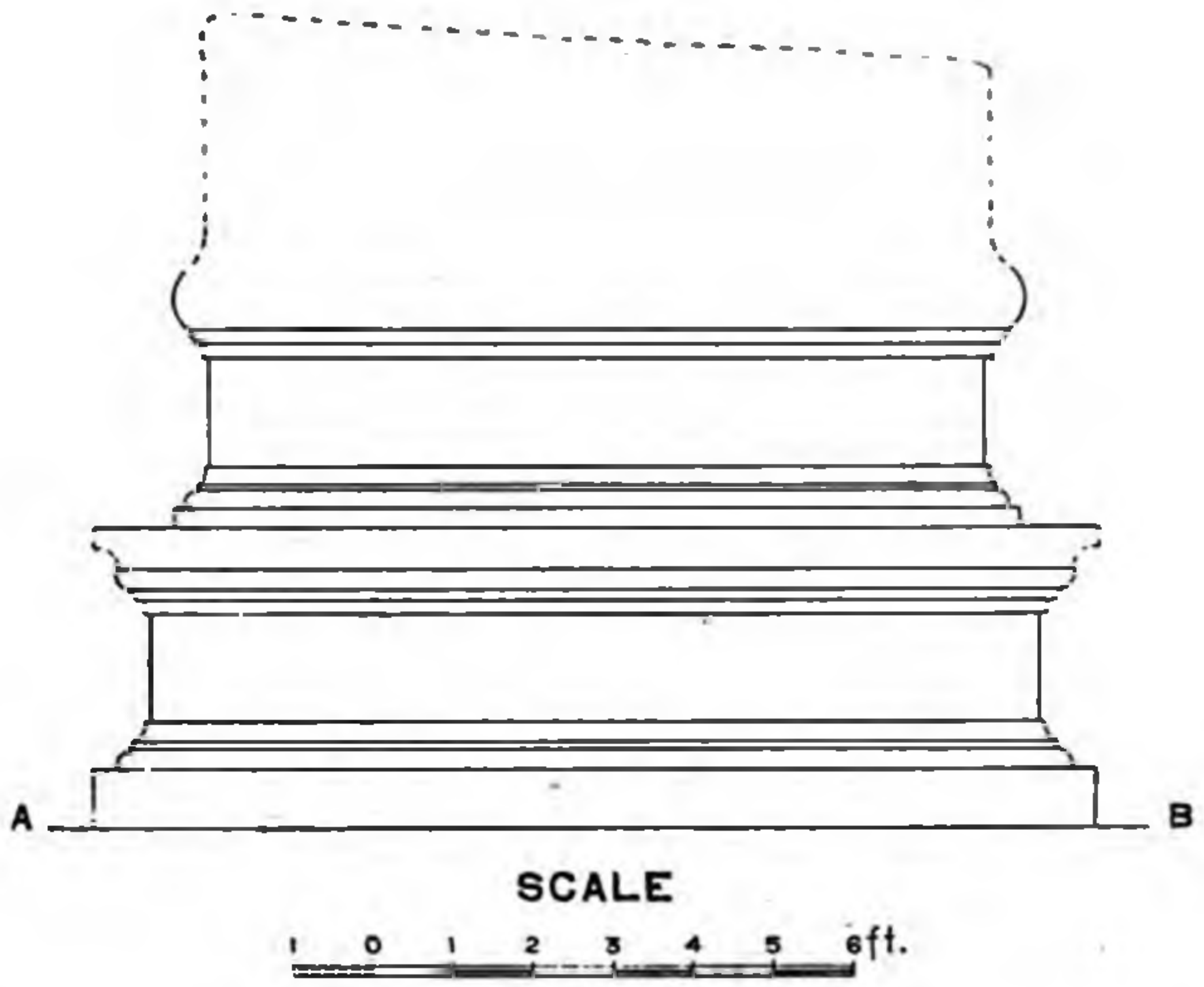


PLAN AND ELEVATION OF RUINED SHRINE M.III, MĪRĀN.

Masonry of sun-dried bricks

ditto ditto broken

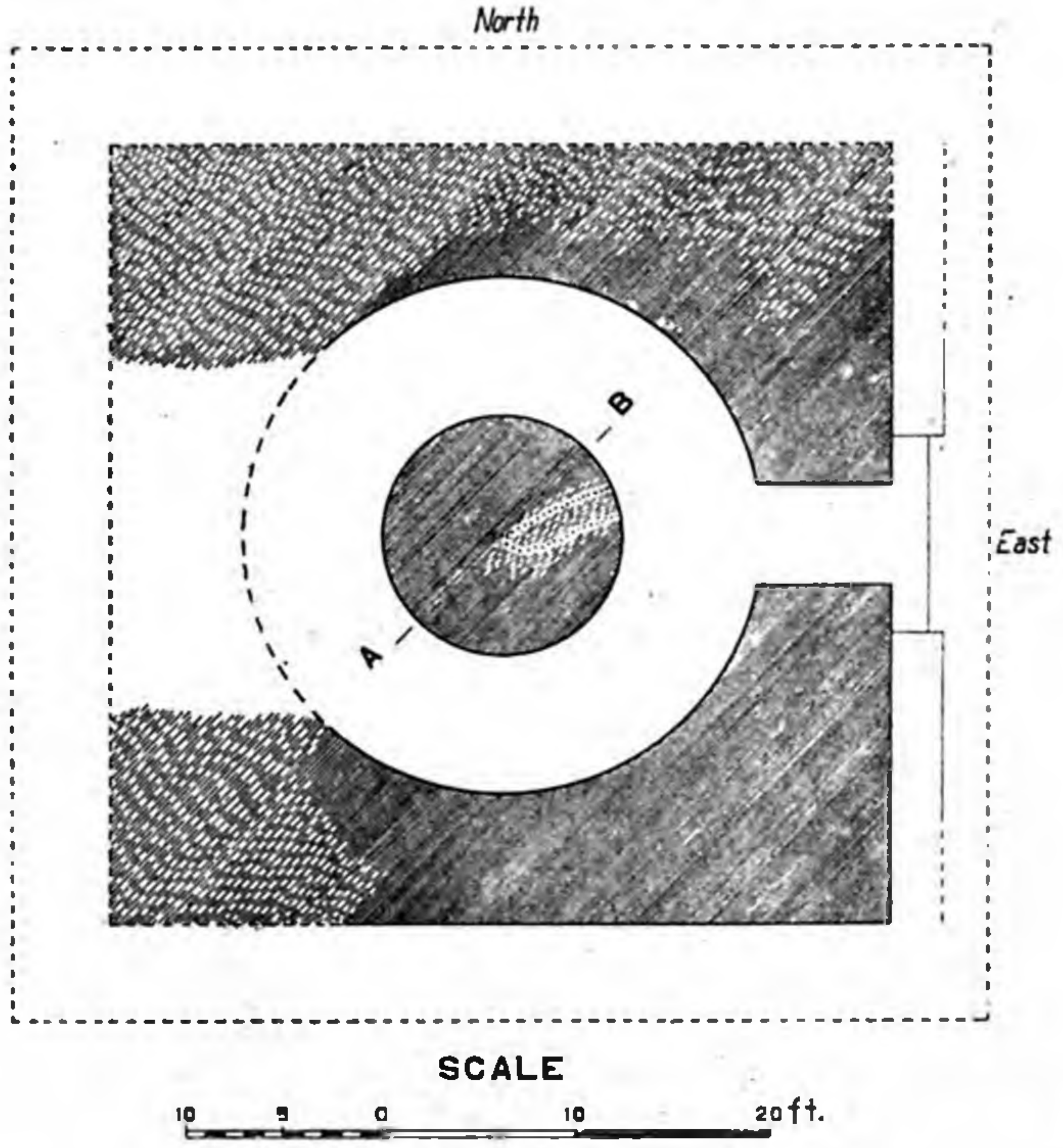




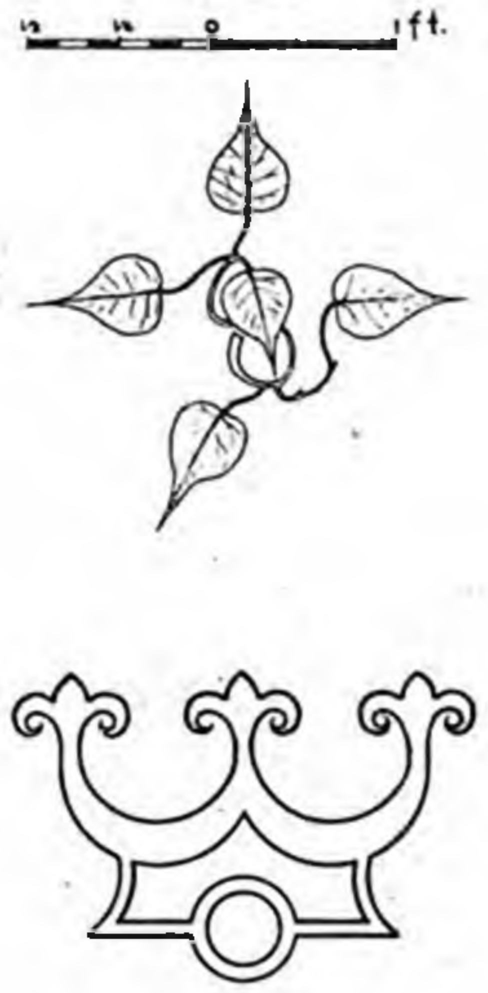
PLAN AND ELEVATION OF RUINED SHRINE M.V. MĪRĀN.

Masonry of sun-dried bricks

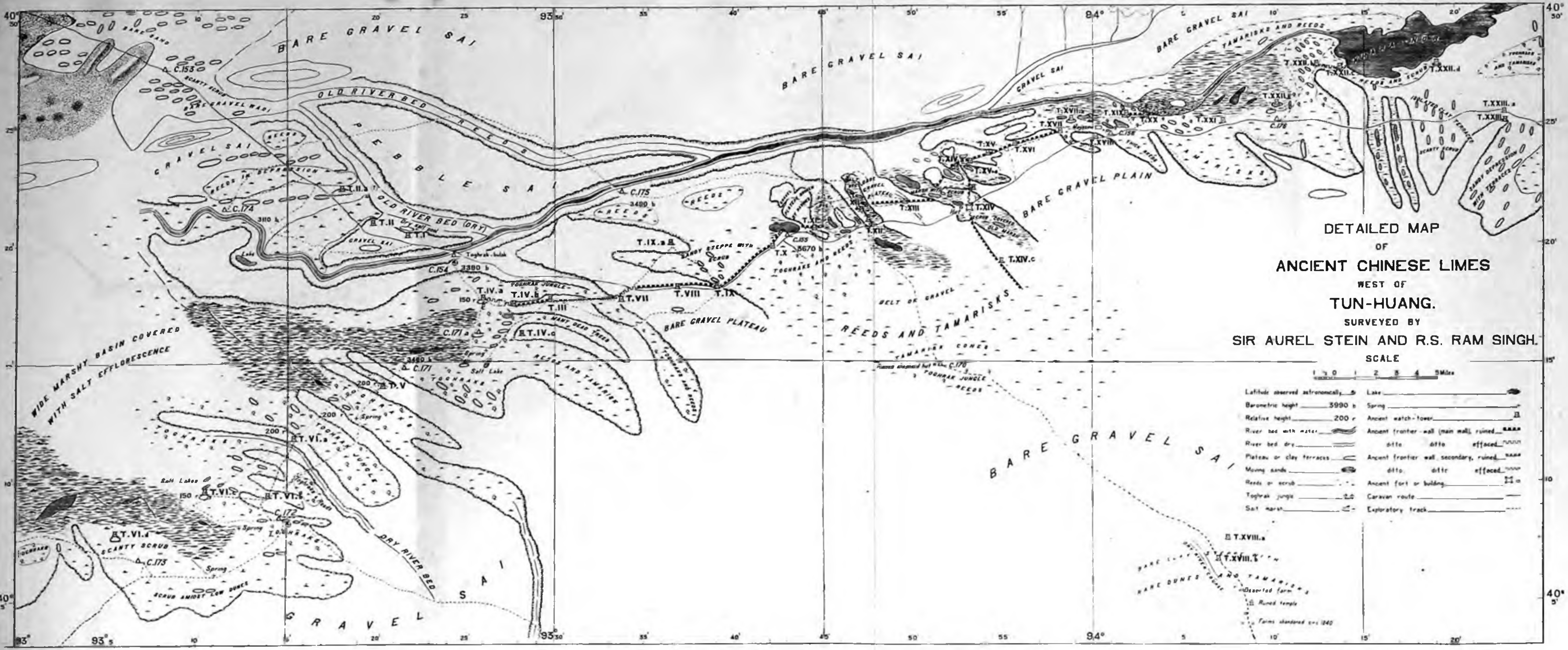
ditto ditto broken



PLASTER ORNAMENTS ON STŪPA OF M. III. SCALE

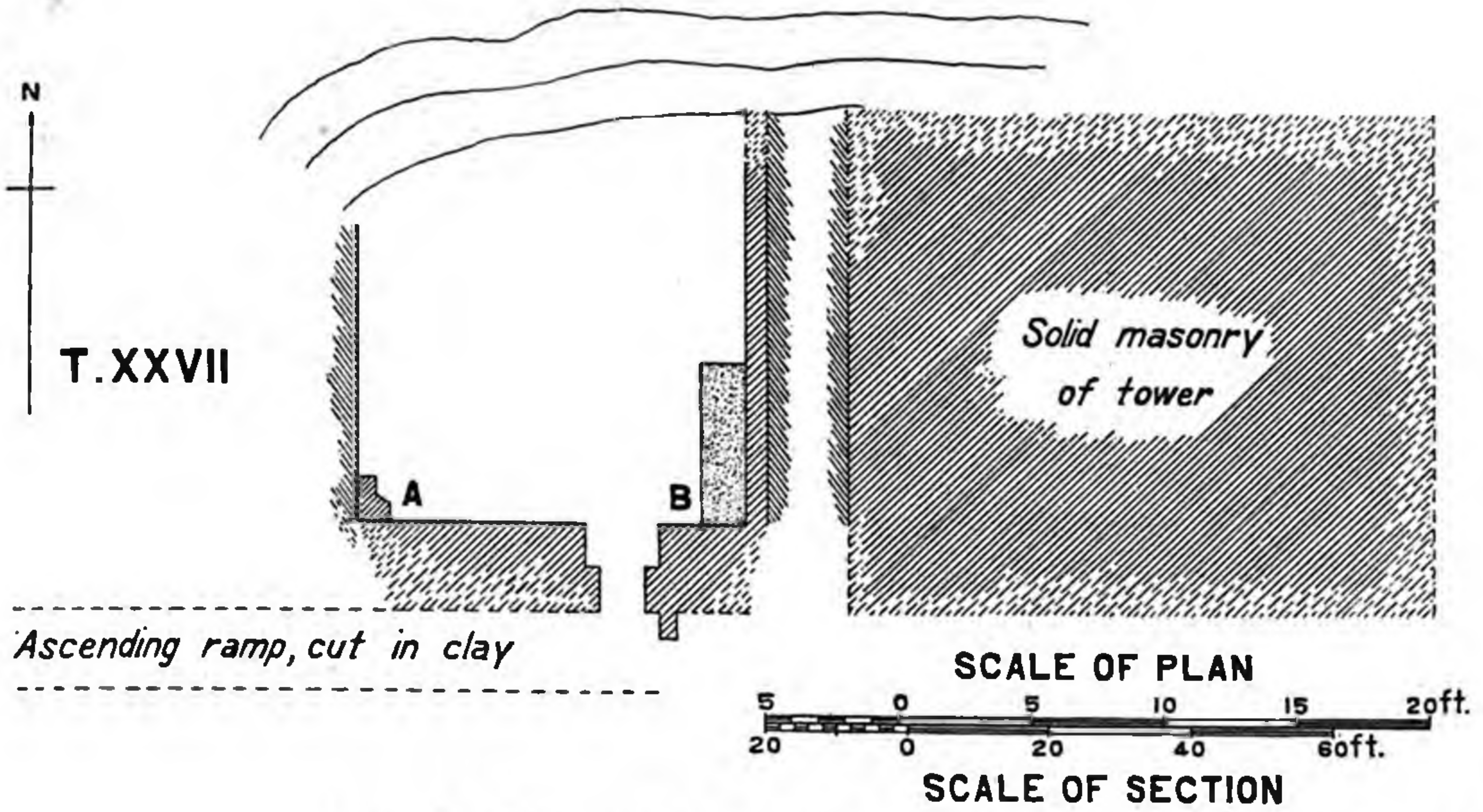


A. STEIN & NAIK RAM SINGH DEL.

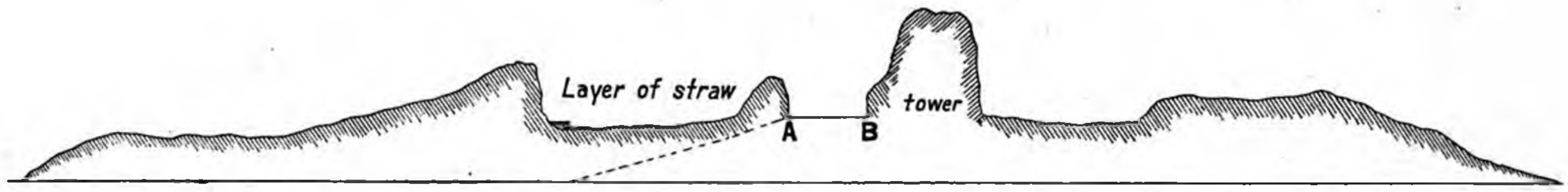

DETAILED MAP
OF
ANCIENT CHINESE LIMES
WEST OF
TUN-HUANG.
SURVEYED BY
SIR AUREL STEIN AND R.S. RAM SINGH.
SCALE
5 Miles
Latitude observed astronomically
Barometric height 3990 b
Relative height 200 r
River bed with water
River bed dry
Plateau or clay terraces
Moving sands
Reeds or scrub
Toghrak jungle
Salt marsh
Lake
Spring
Ancient watch-tower
Ancient frontier-wall (main wall), ruined
ditto ditto effaced
Ancient frontier wall, secondary, ruined
ditto ditto effaced
Ancient fort or building
Caravan route
Exploratory track
BARE GRAVEL SAI
OLD RIVER BED
PEBBLE SAI
REEDS
OLD RIVER BED (DRY)
GRAVEL SAI
BARE GRAVEL PLATEAU
REEDS AND TAMARISKS
BELT OF GRAVEL
BARE GRAVEL PLAIN
TAMARISKS AND REEDS
WIDE MARSHY BASIN COVERED WITH SALT EFFLORESCENCE
TOGHRAK JUNGLE
DRY RIVER BED
SCANTY SCRUB
SCRUB AMIDST LOW DUNES
GRAVEL SAI
Salt Lakes
Salt Lake
Spring
Lake
T.I
T.II
T.III
T.IV.a
T.IV.b
T.IV.c
T.V
T.VI.a
T.VI.b
T.VI.d
T.VII
T.VIII
T.IX
T.IX.a
T.X
T.XII
T.XIII
T.XIV
T.XIV.c
T.XV
T.XVI
T.XVII
T.XVIII
T.XVIII.a
T.XX
T.XXI
T.XXII.d
T.XXIII.a
C.153
C.154
C.171
C.172
C.173
C.174
C.175
C.176
3390 b
3490 b
3480 b
3670 b
Deserted farm
Ruined temple
Farms abandoned circ. 1840
93°
93°5
93°30
94°
40°

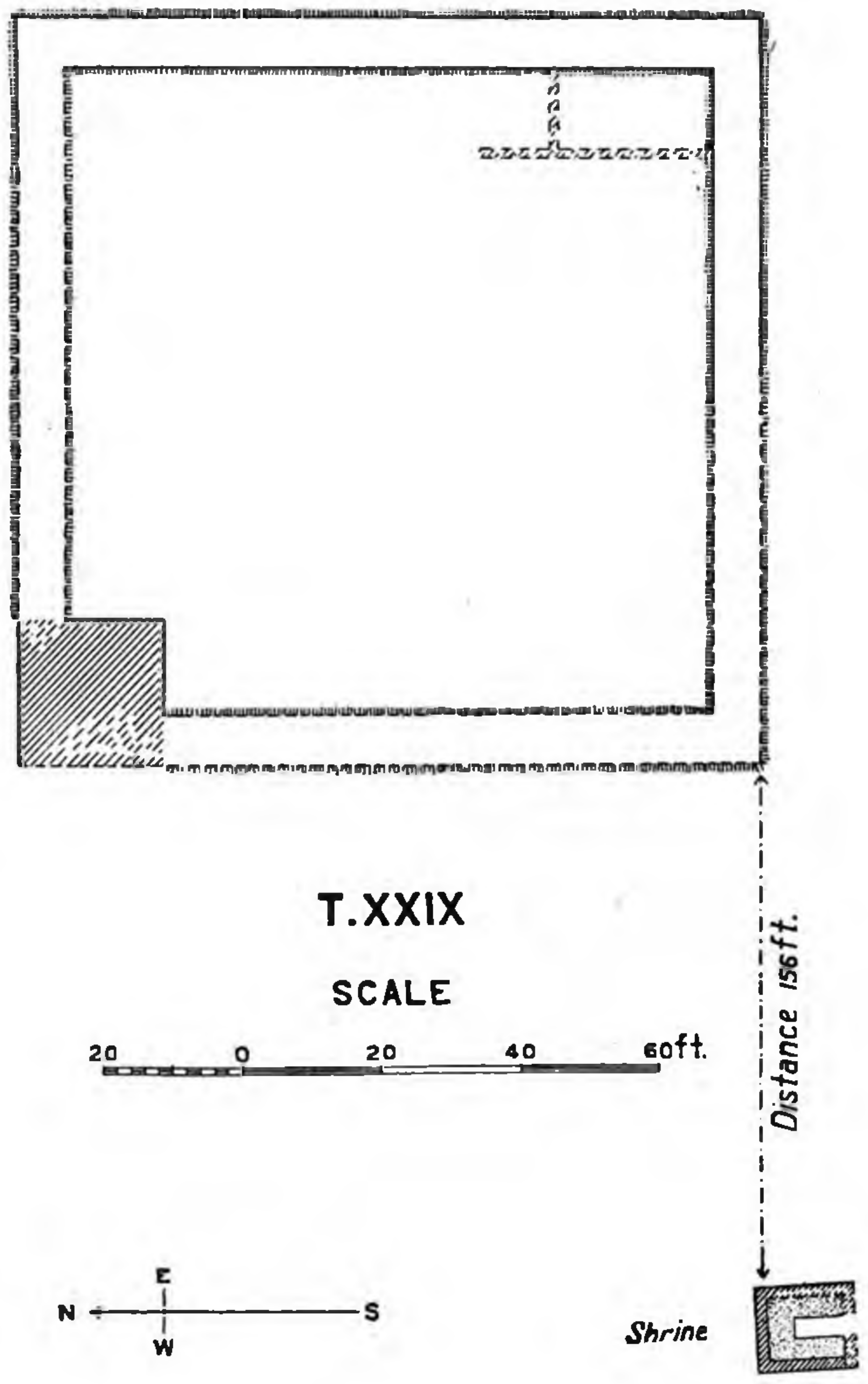
PLANS OF WATCH STATIONS, T.XXV, XXVII, XXIX, ON ANCIENT LIMES NORTH OF TUN-HUANG.

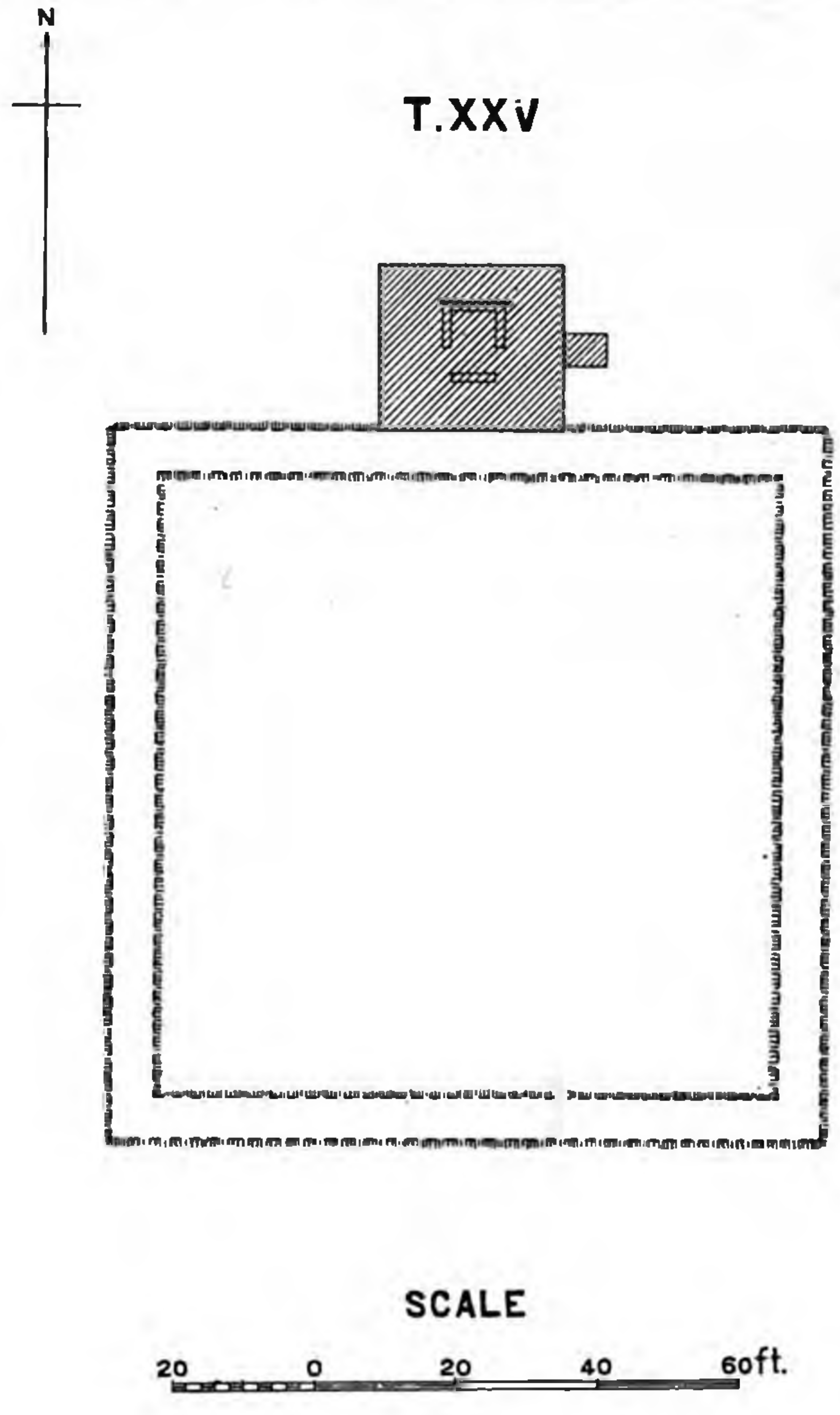
Masonry of sun-dried bricks
ditto ditto broken
Natural clay
Earth rampart with brushwood



SECTION OF CLAY RIDGE BEARING WATCH-STATION T.XXVII.

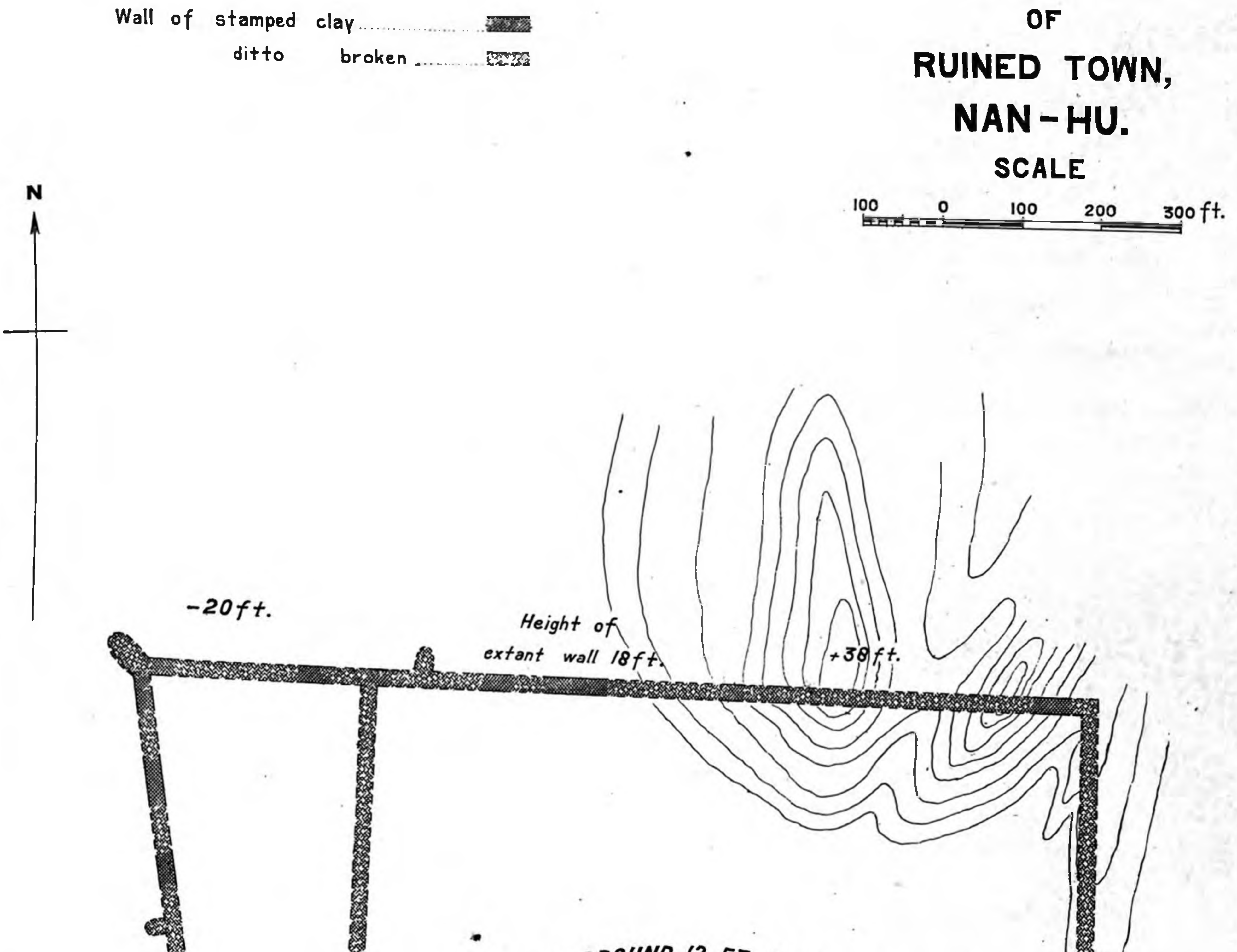






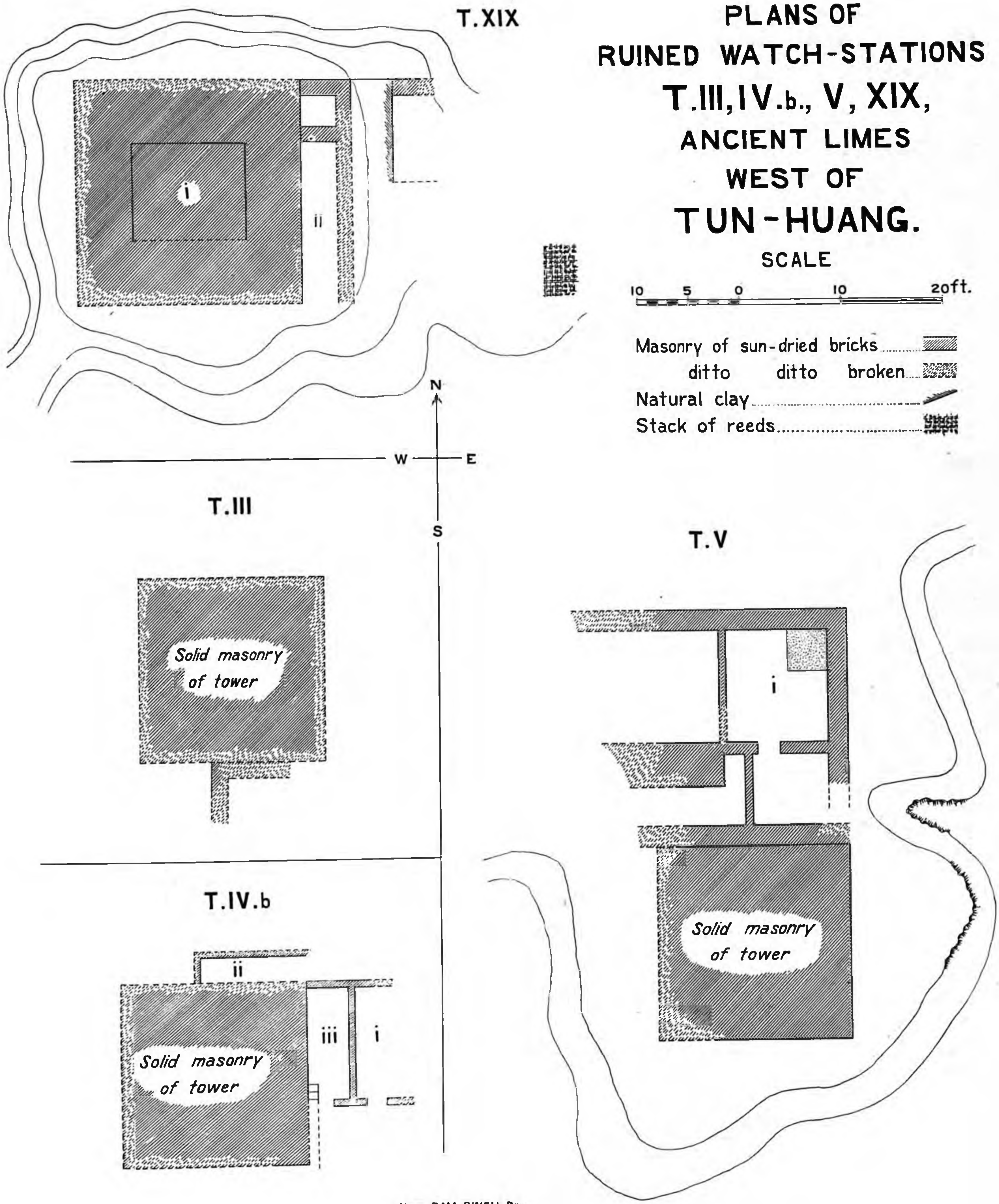
A. STEIN & NAIK RAM SINGH DEL.

PLAN OF RUINED TOWN, NAN-HU.



A. STEIN & R. S. RAM SINGH DEL.

PLANS OF RUINED WATCH-STATIONS T.III, IV.b., V, XIX, ANCIENT LIMES WEST OF TUN-HUANG.



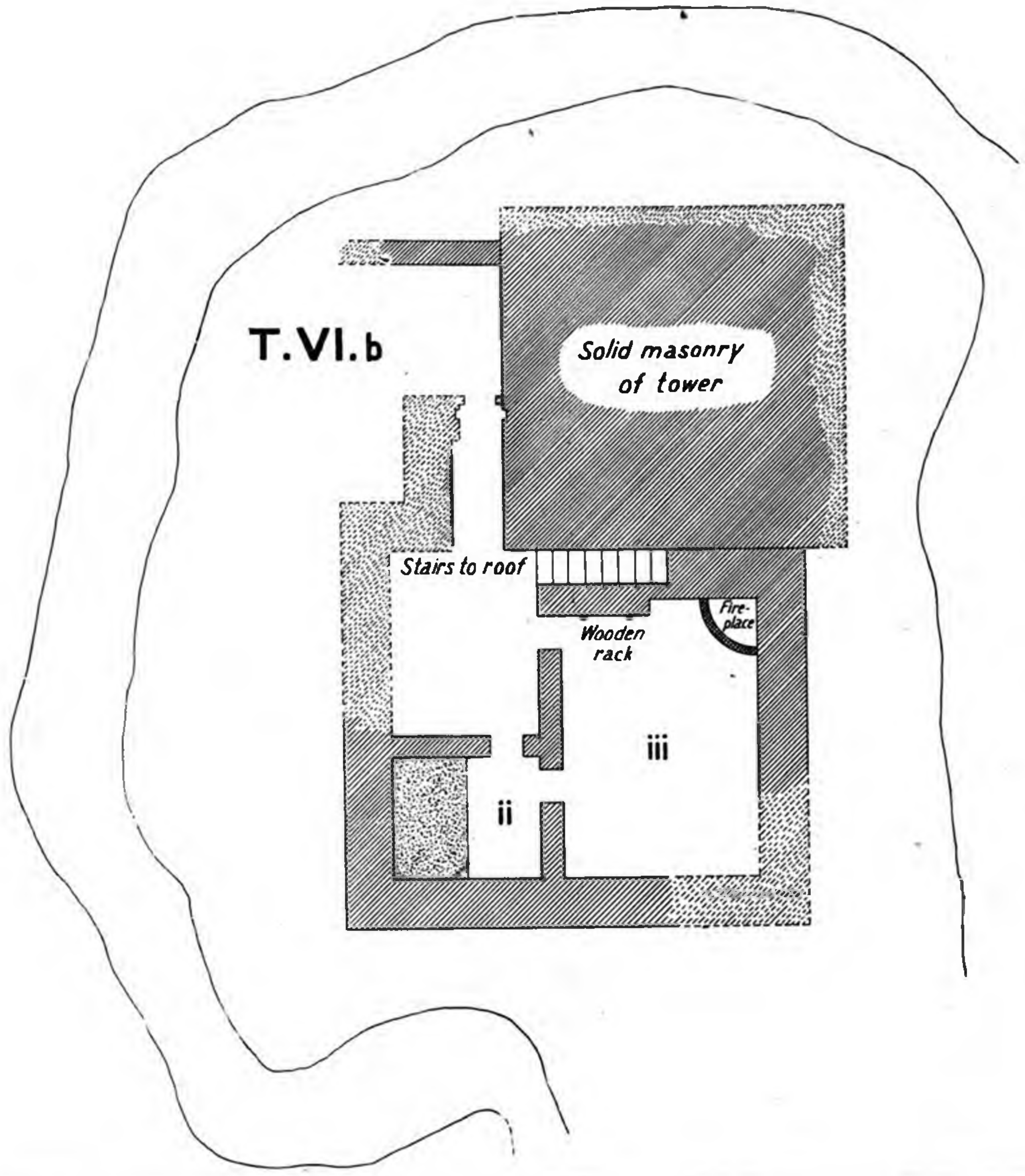
NAIK RAM SINGH DEL.

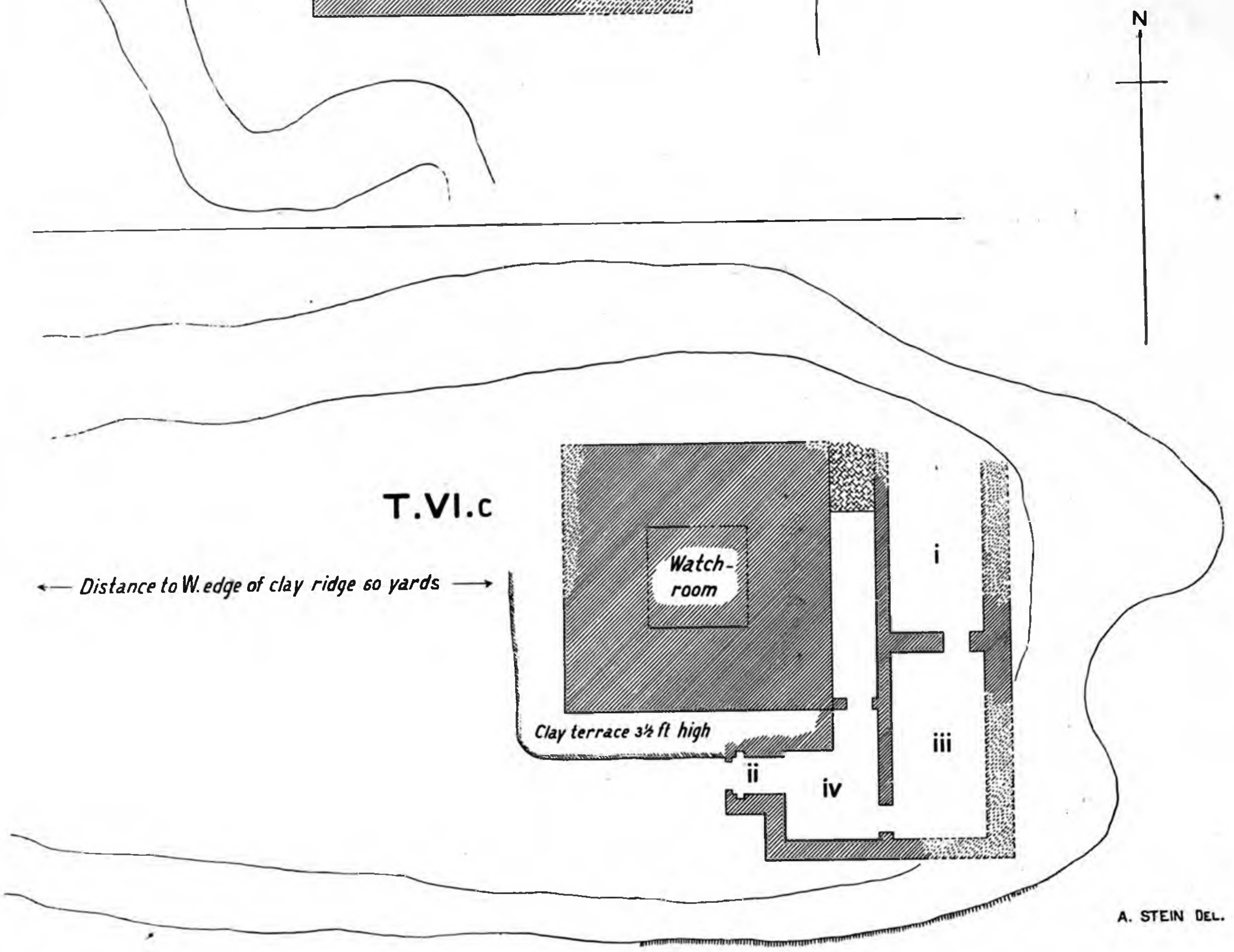
PLANS OF RUINED WATCH-STATIONS, T.VI.b,c, AT WESTERN EXTREMITY OF ANCIENT LIMES, TUN-HUANG.

SCALE

10 5 0 10 20 ft.

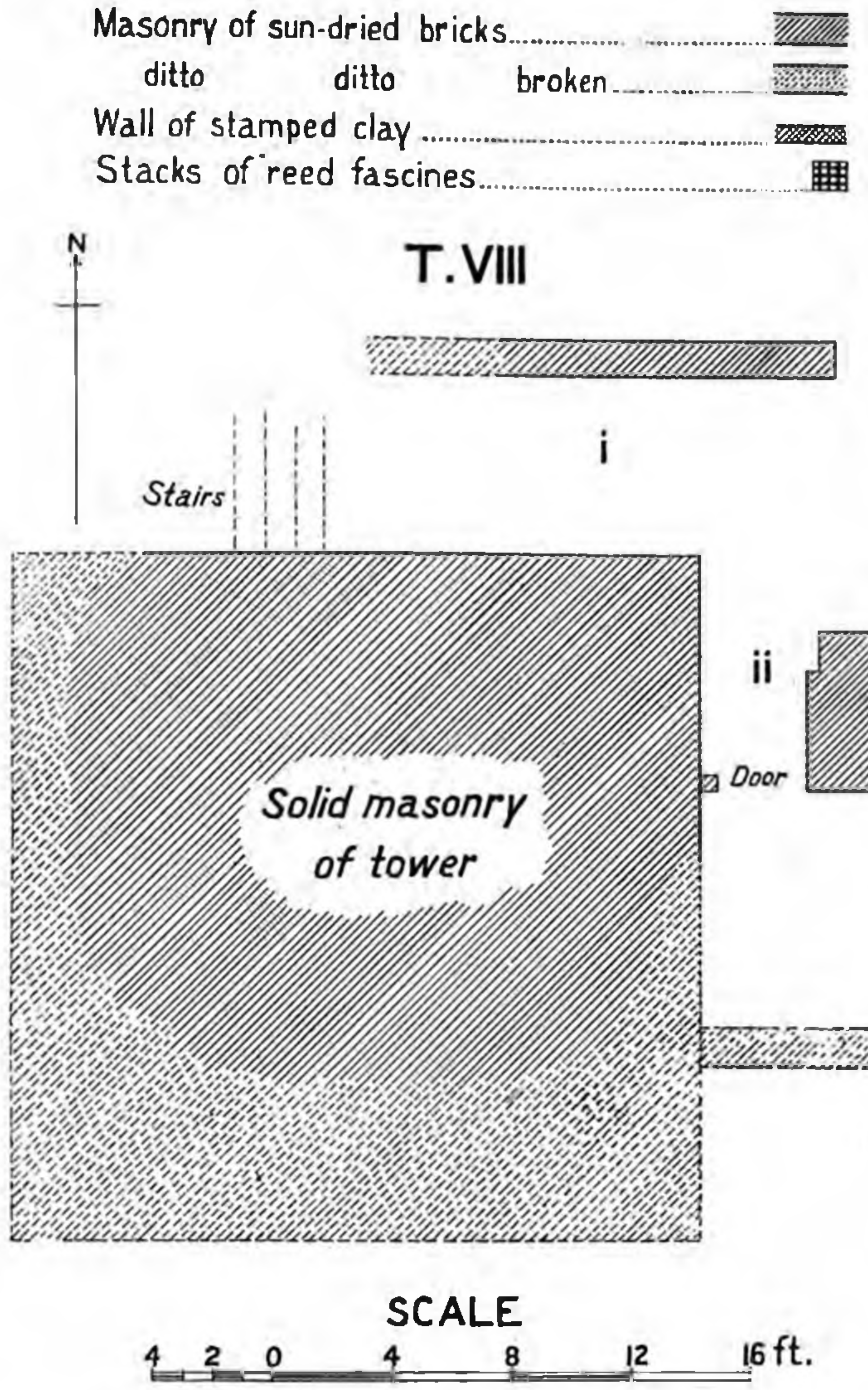
Masonry of sun-dried bricks
ditto ditto broken
Débris of bricks and clay
Platform of plaster

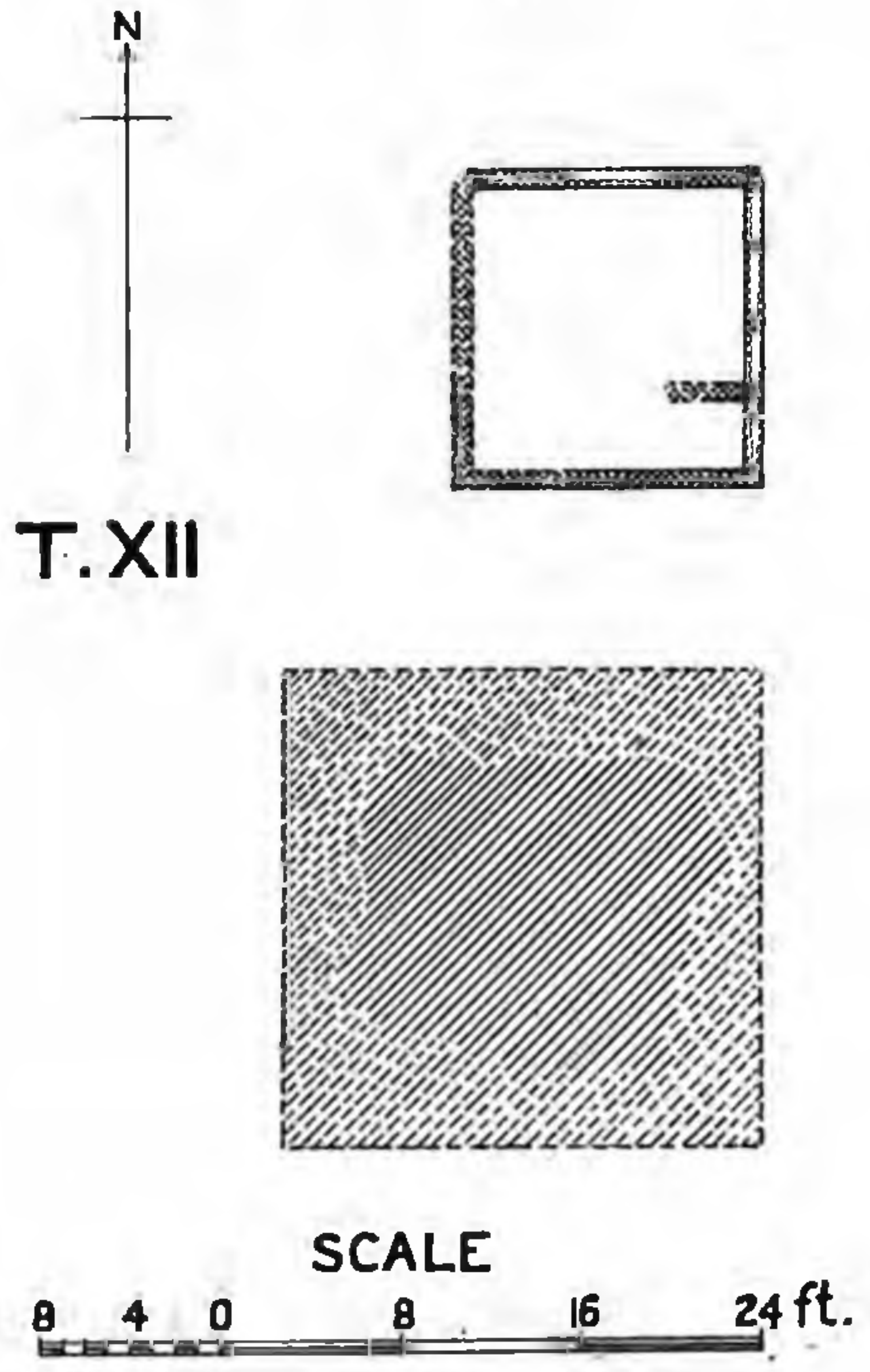


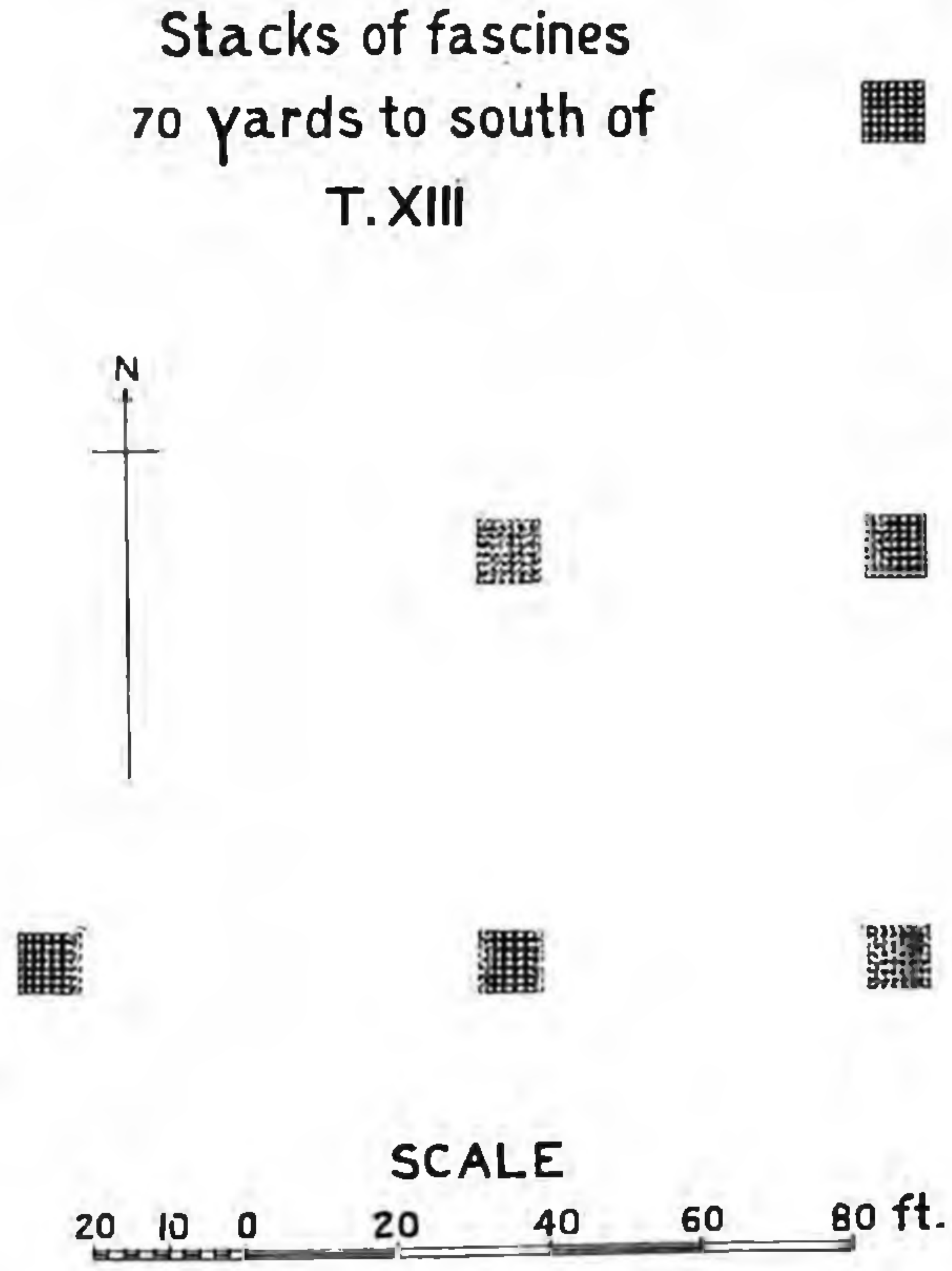


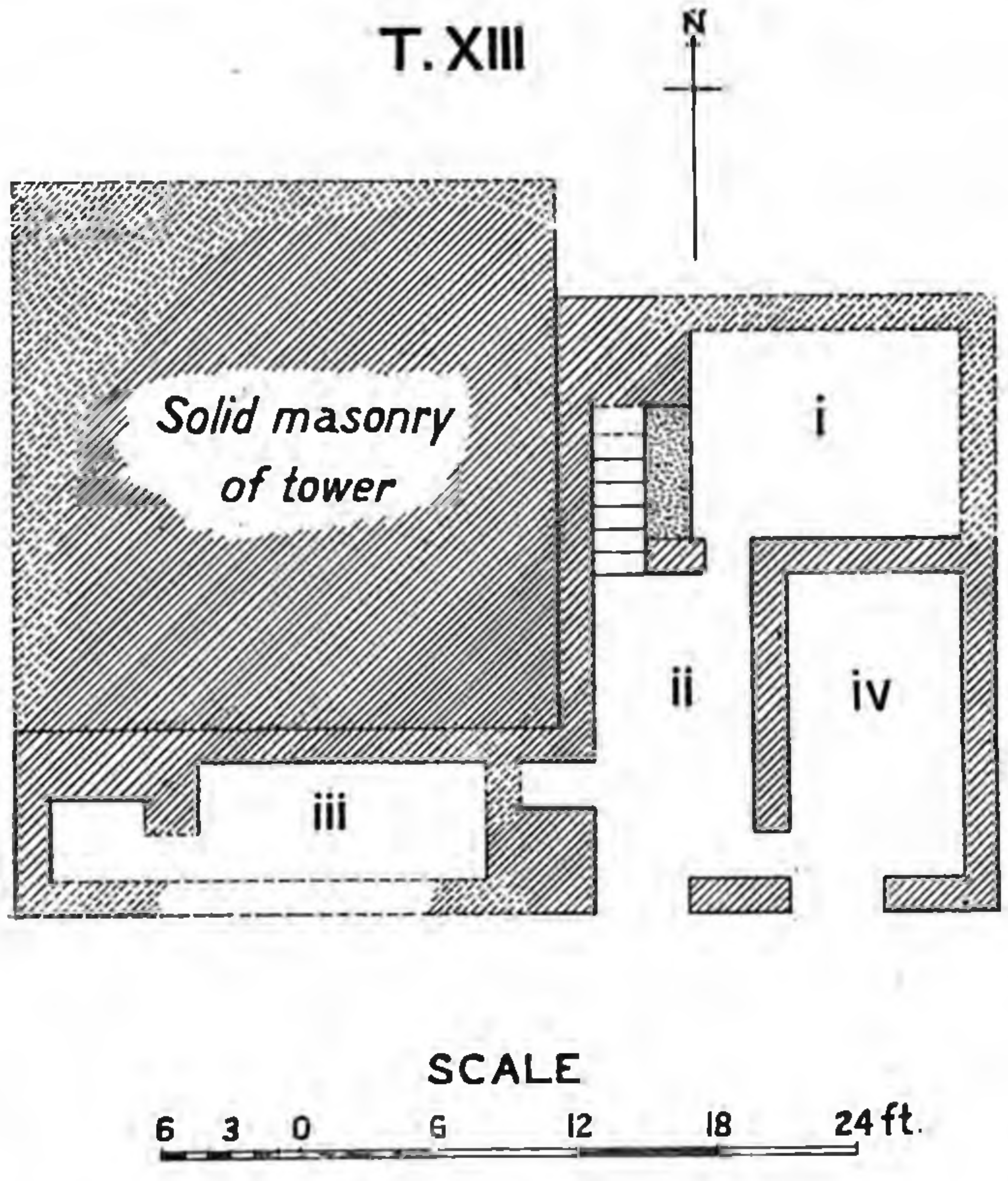
A. STEIN DEL.

PLANS OF RUINED WATCH-STATIONS T.VIII, XII, XIII, ON ANCIENT LIMES, TUN-HUANG.



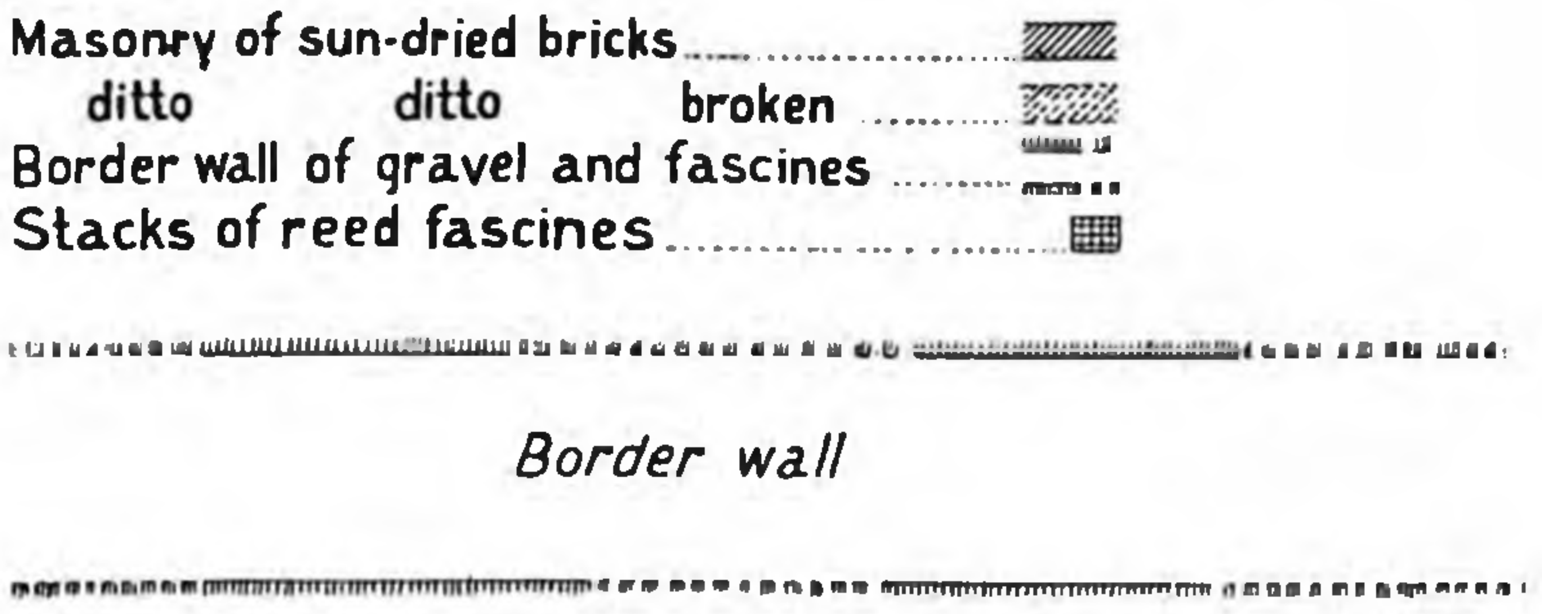


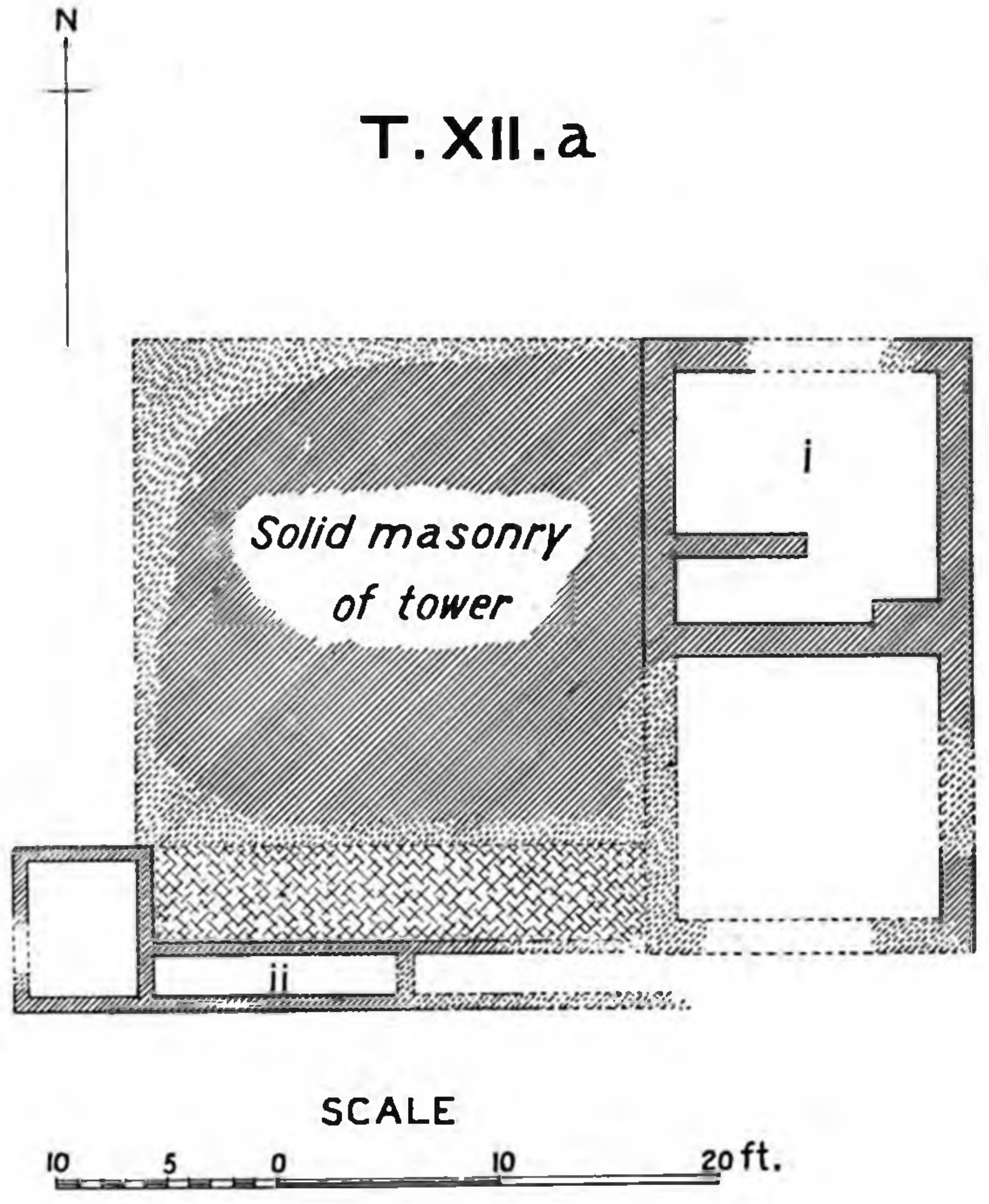


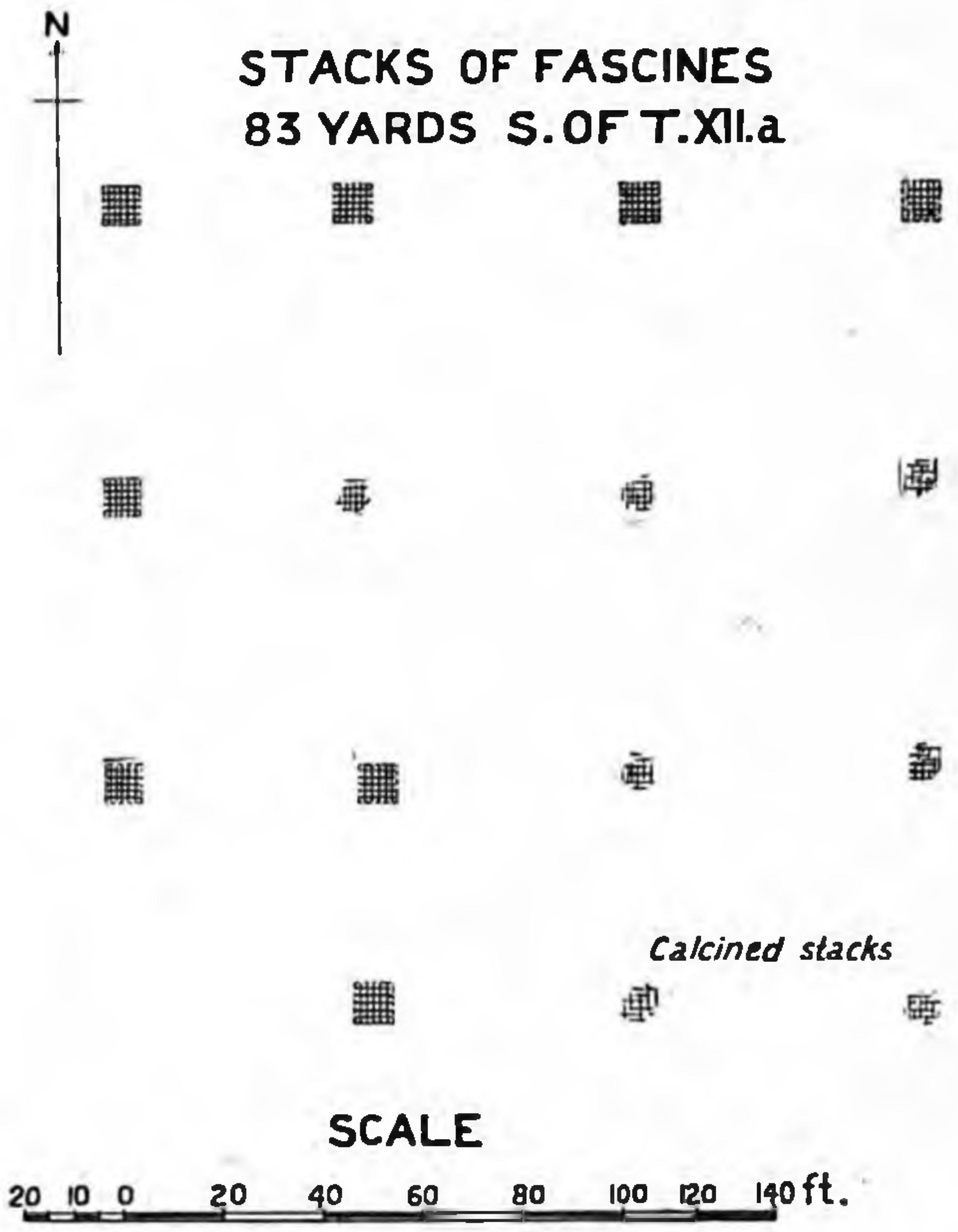


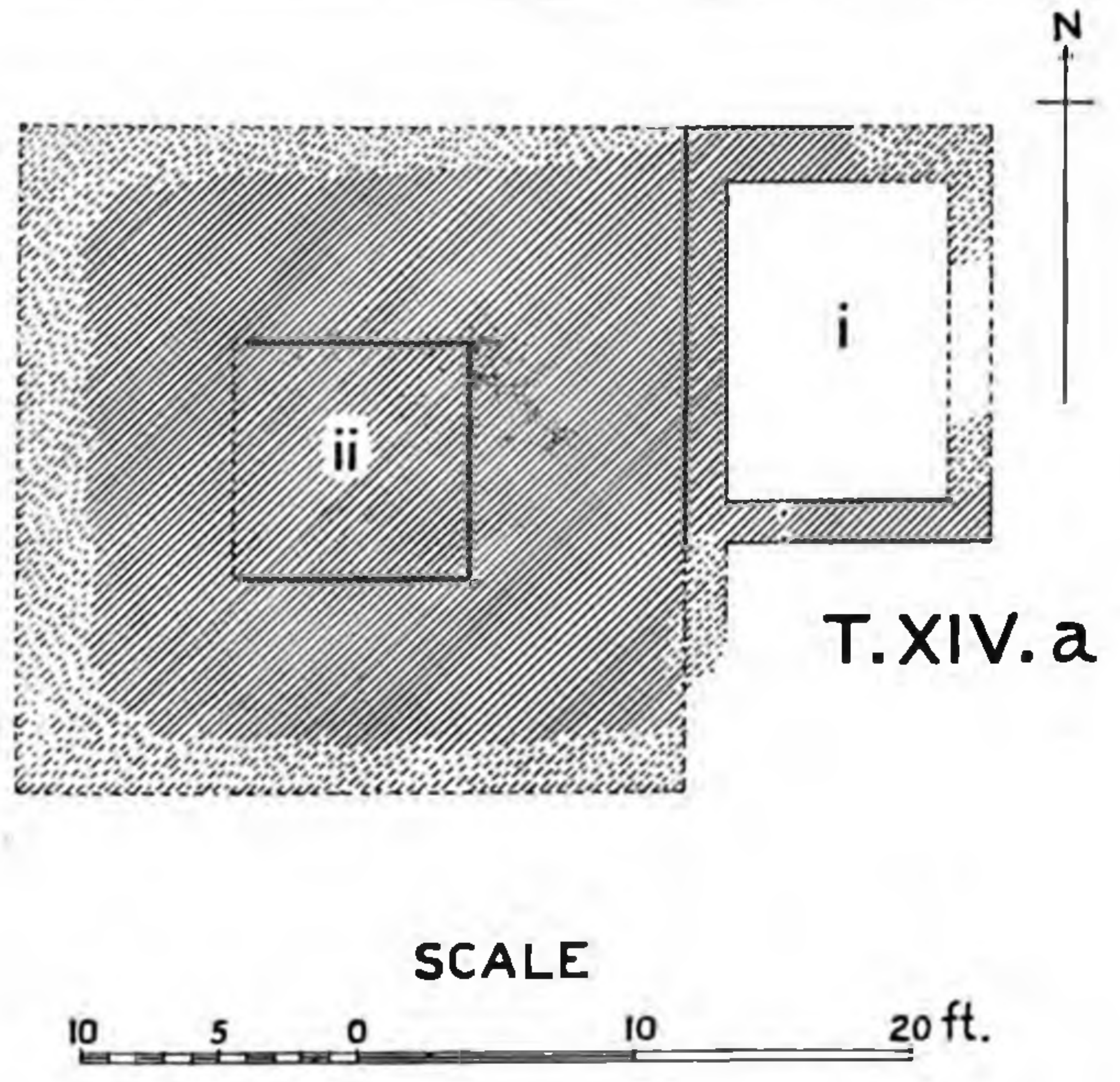
A. STEIN & NAIK RAM SINGH DEL.

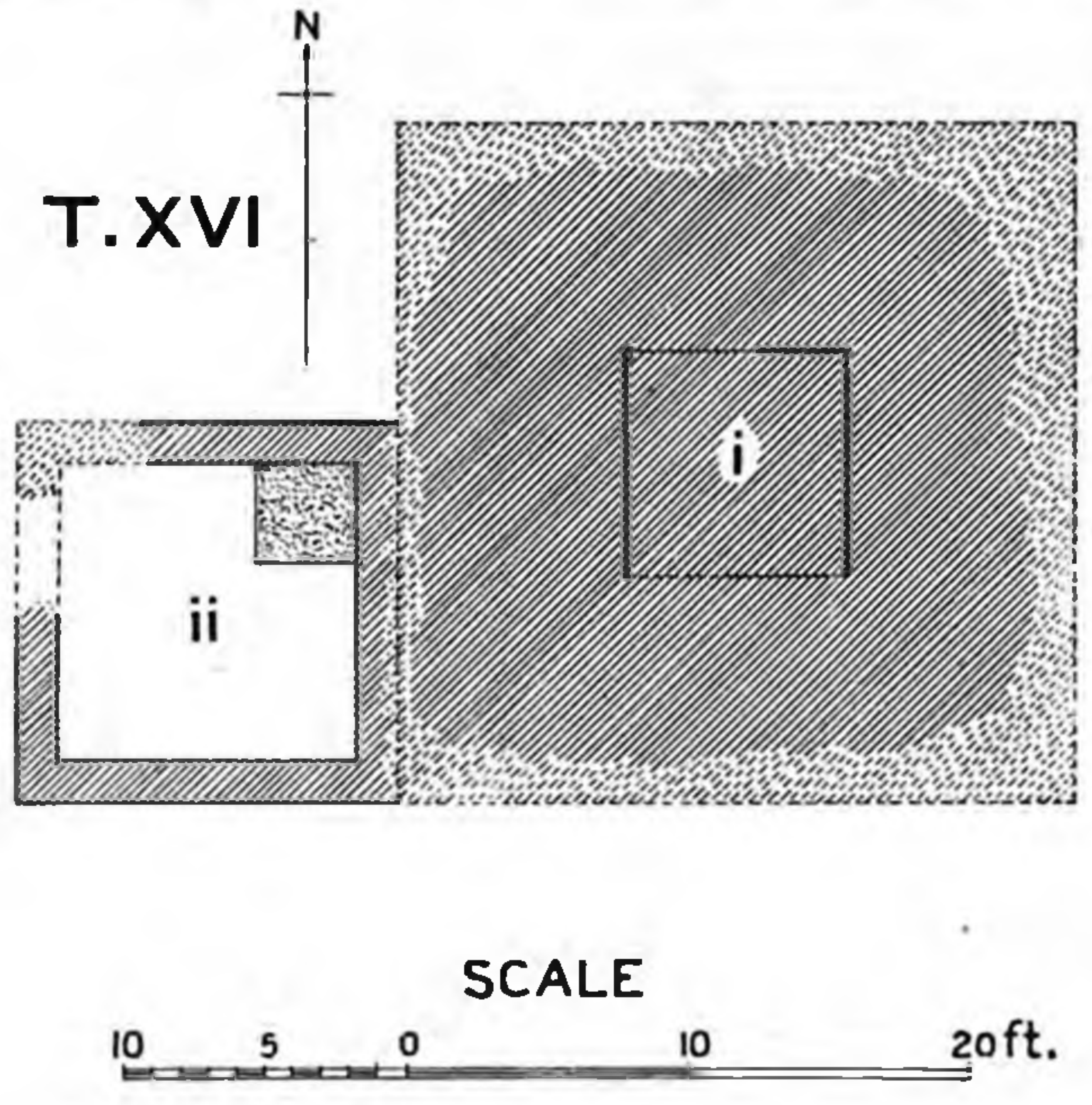
PLANS OF RUINED WATCH-STATIONS T.XII.a, T.XIV.a, T.XVI, ON ANCIENT LIMES WEST OF TUN-HUANG.





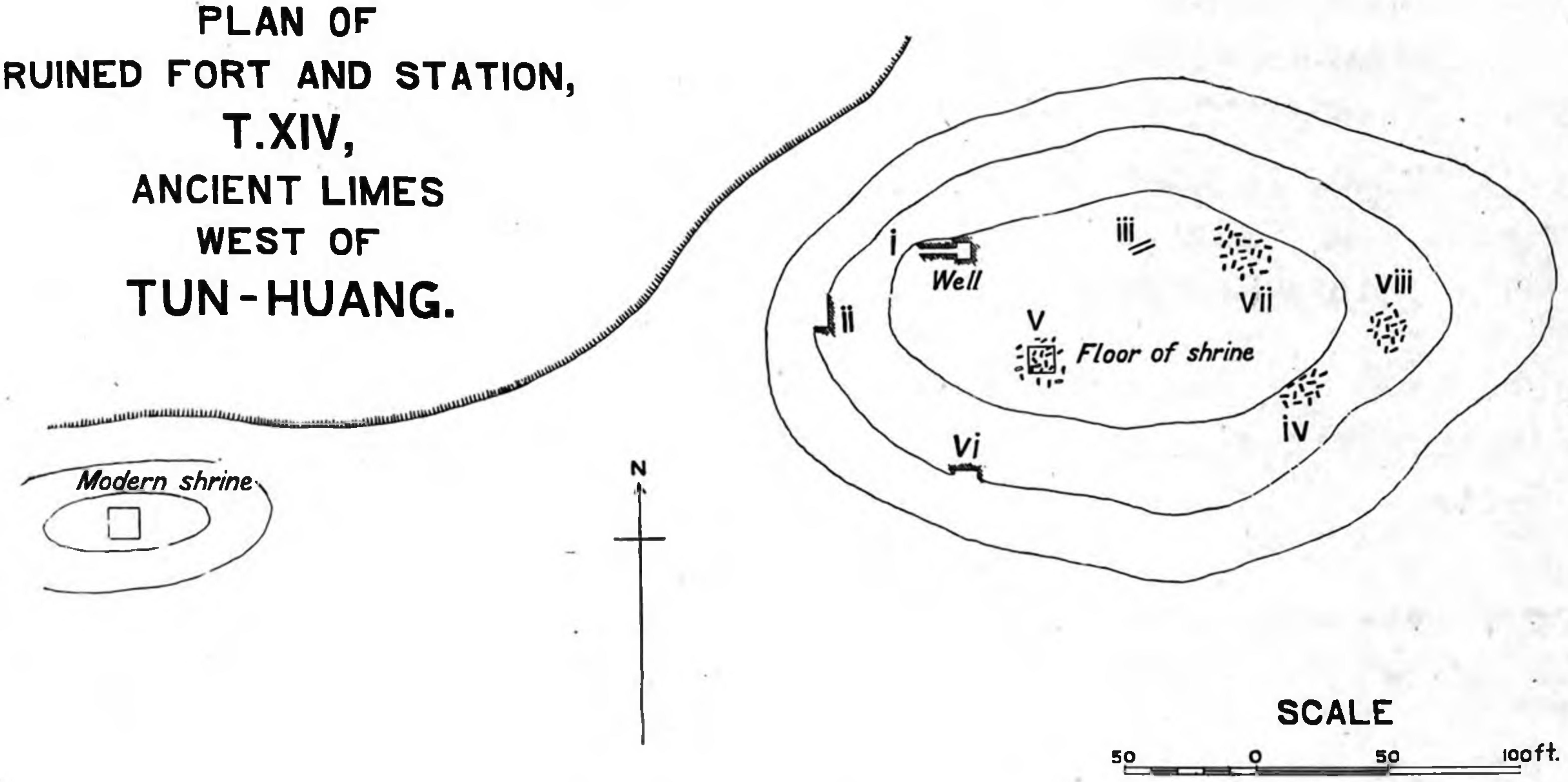




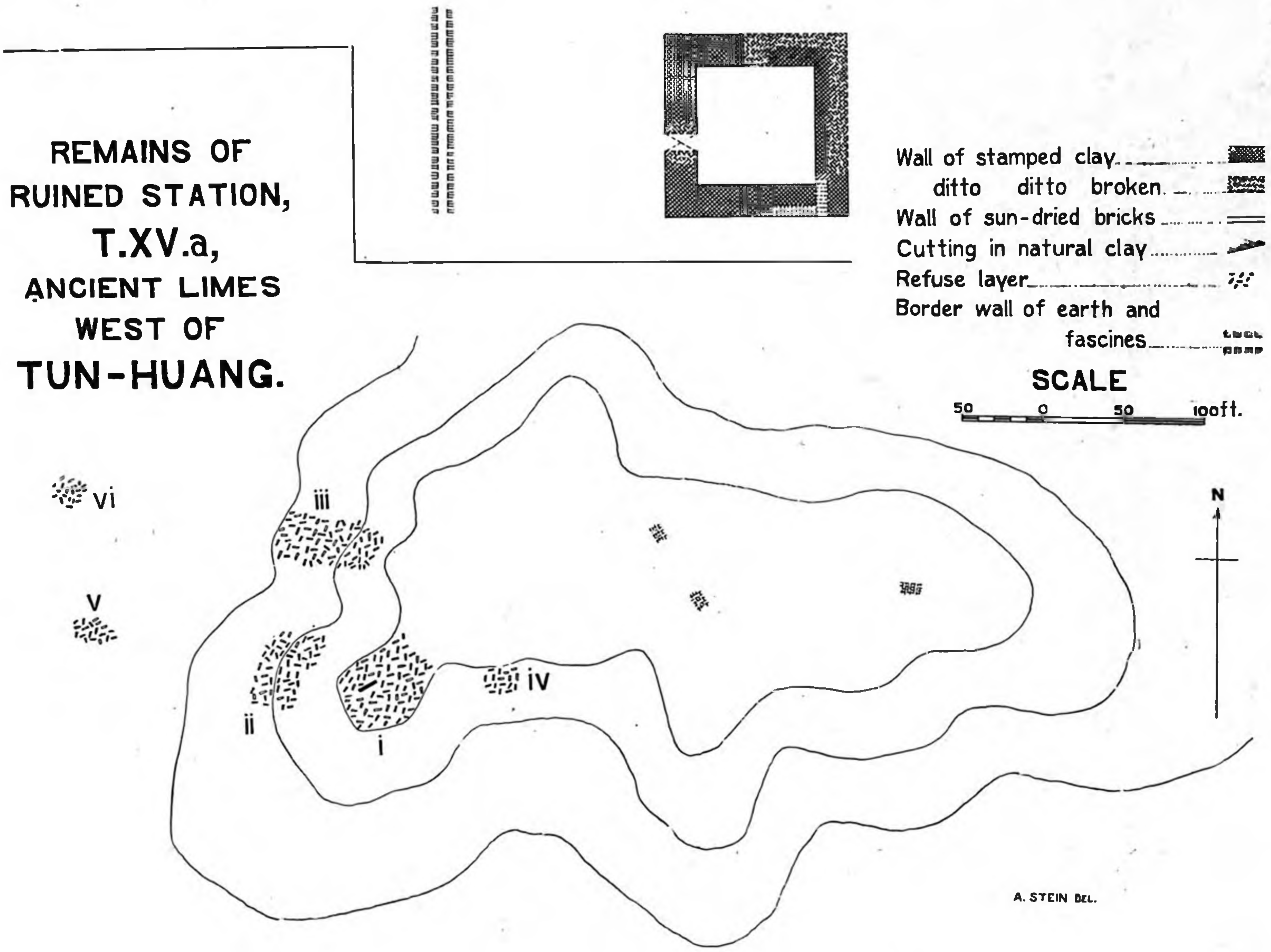


A. STEIN & NAIK RAM SINGH DEL.

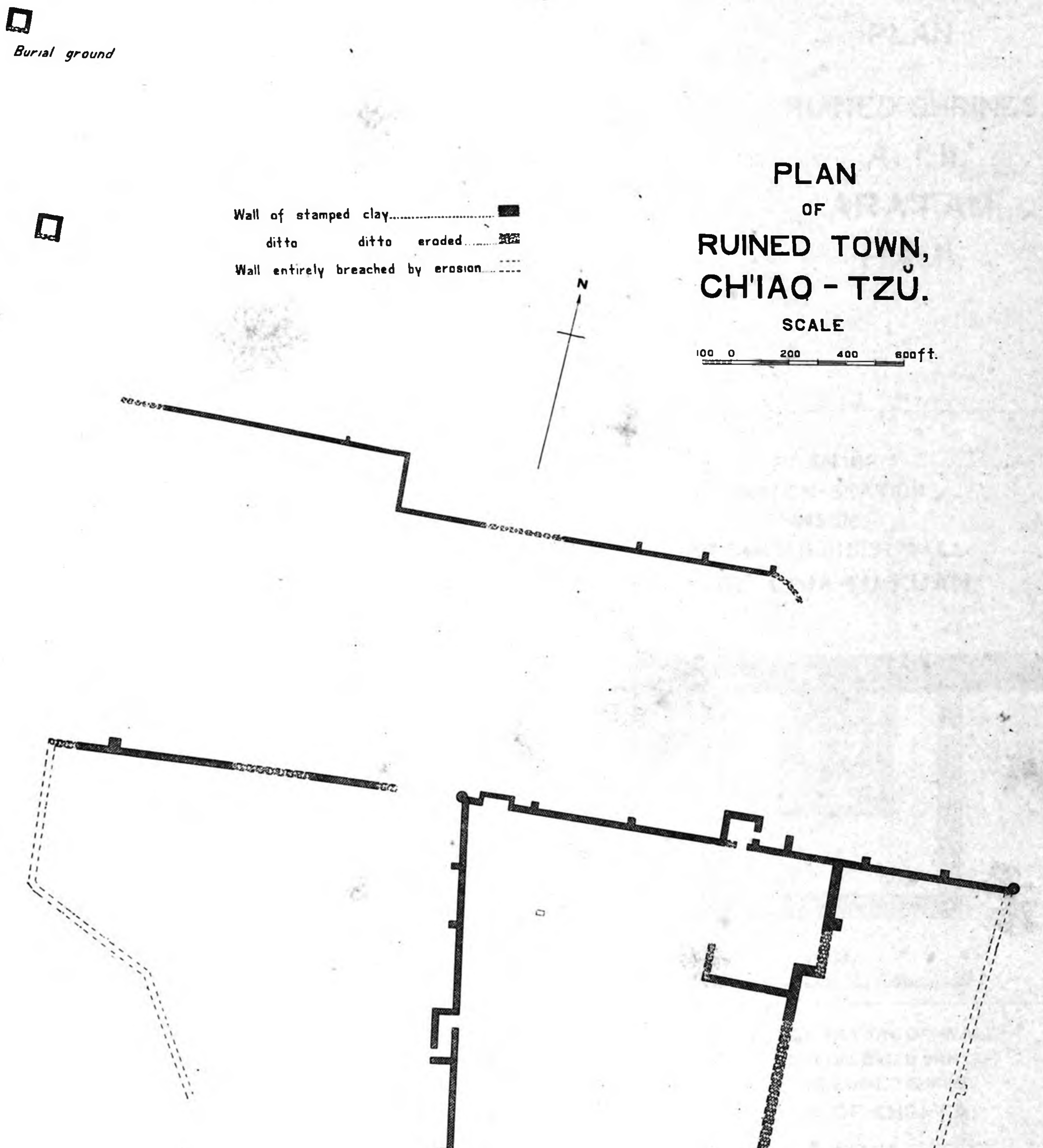
PLAN OF
RUINED FORT AND STATION,
T.XIV,
ANCIENT LIMES
WEST OF
TUN-HUANG.



REMAINS OF
RUINED STATION,
T.XV.a,
ANCIENT LIMES
WEST OF
TUN-HUANG.

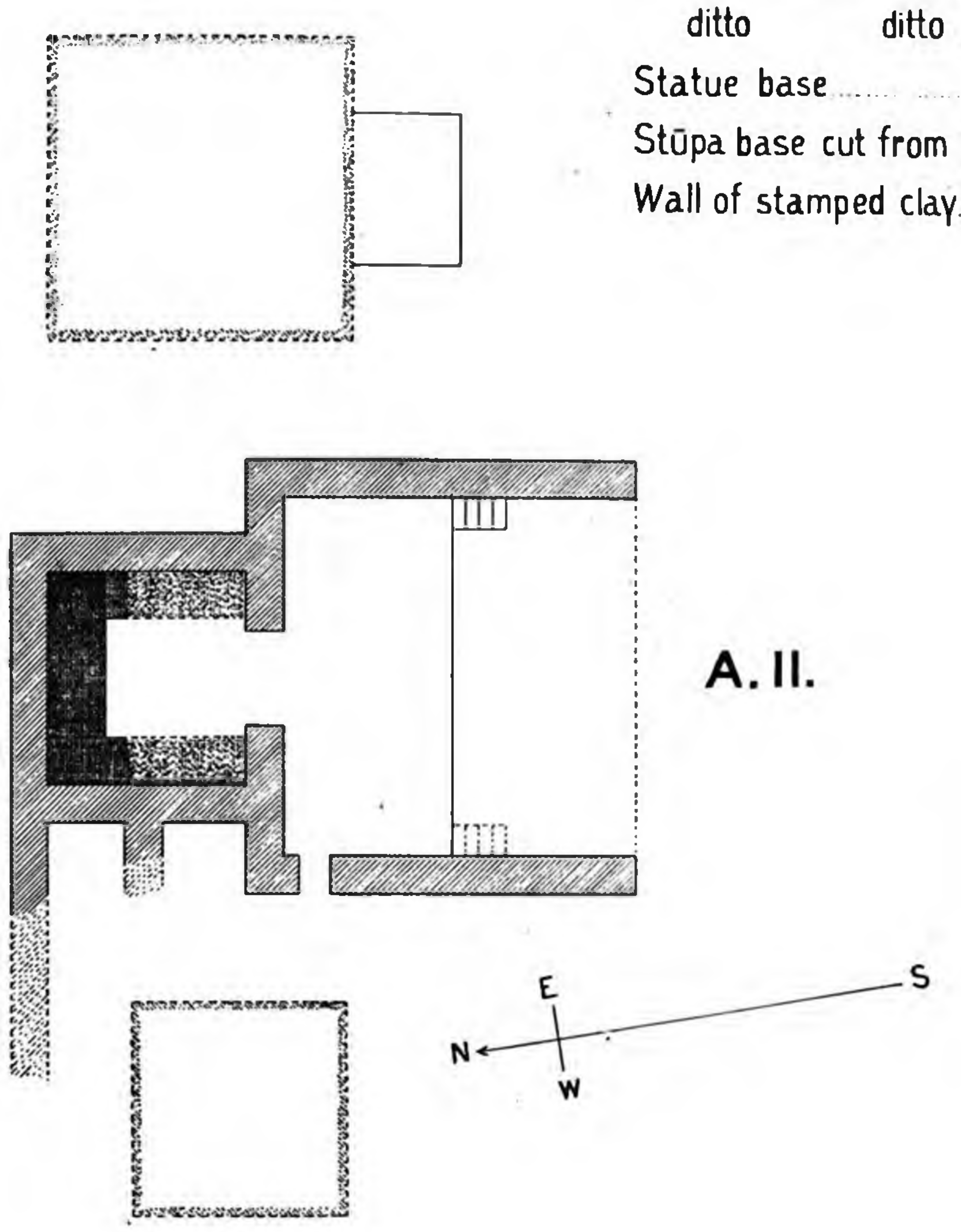


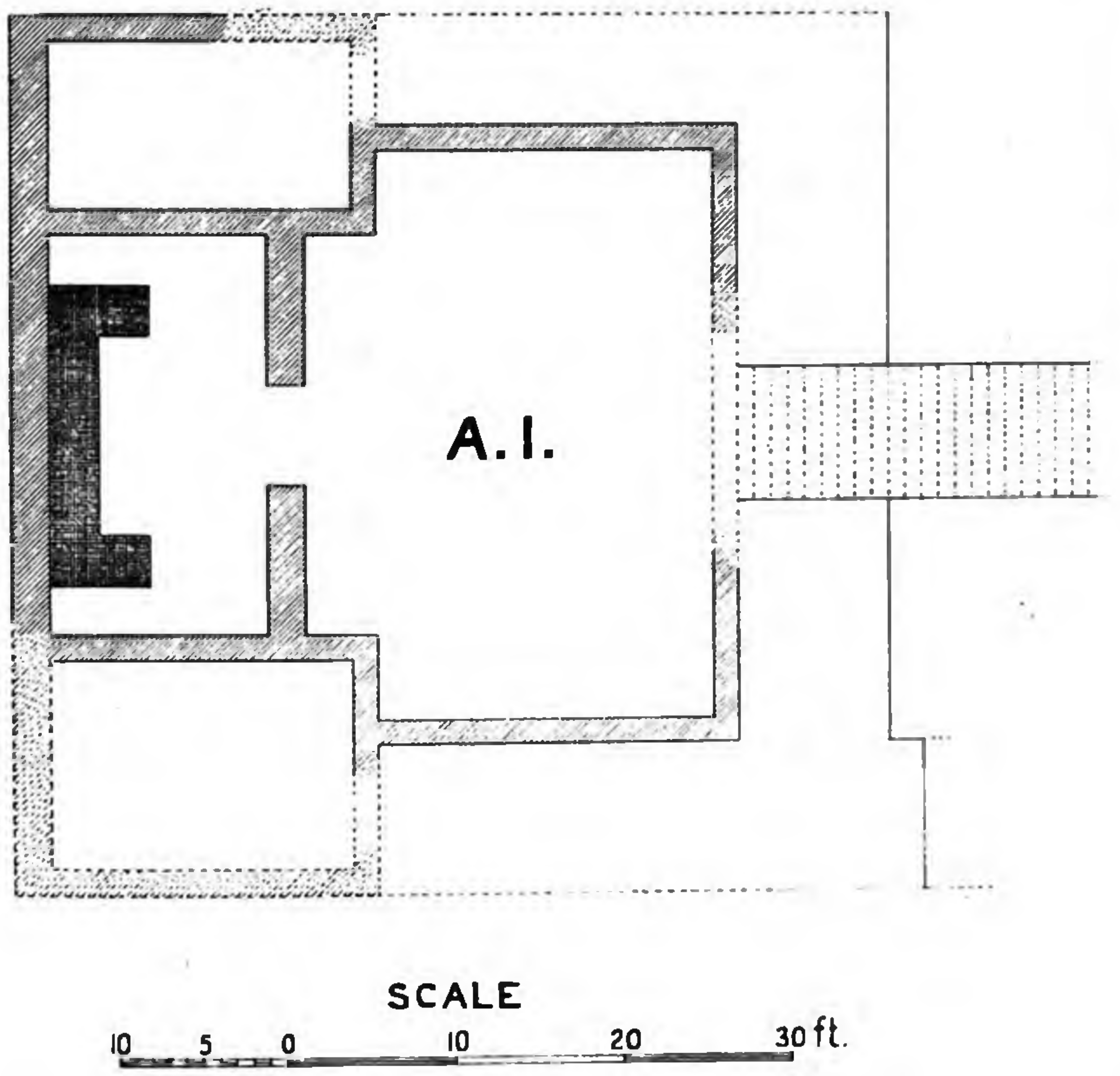
A. STEIN DEL.


Burial ground
Wall of stamped clay
ditto ditto eroded
Wall entirely breached by erosion
N
PLAN
OF
RUINED TOWN,
CH'IAO - TZŬ.
SCALE
100 0 200 400 600 ft.
A. STEIN & NAIK RAM SINGH DEL.

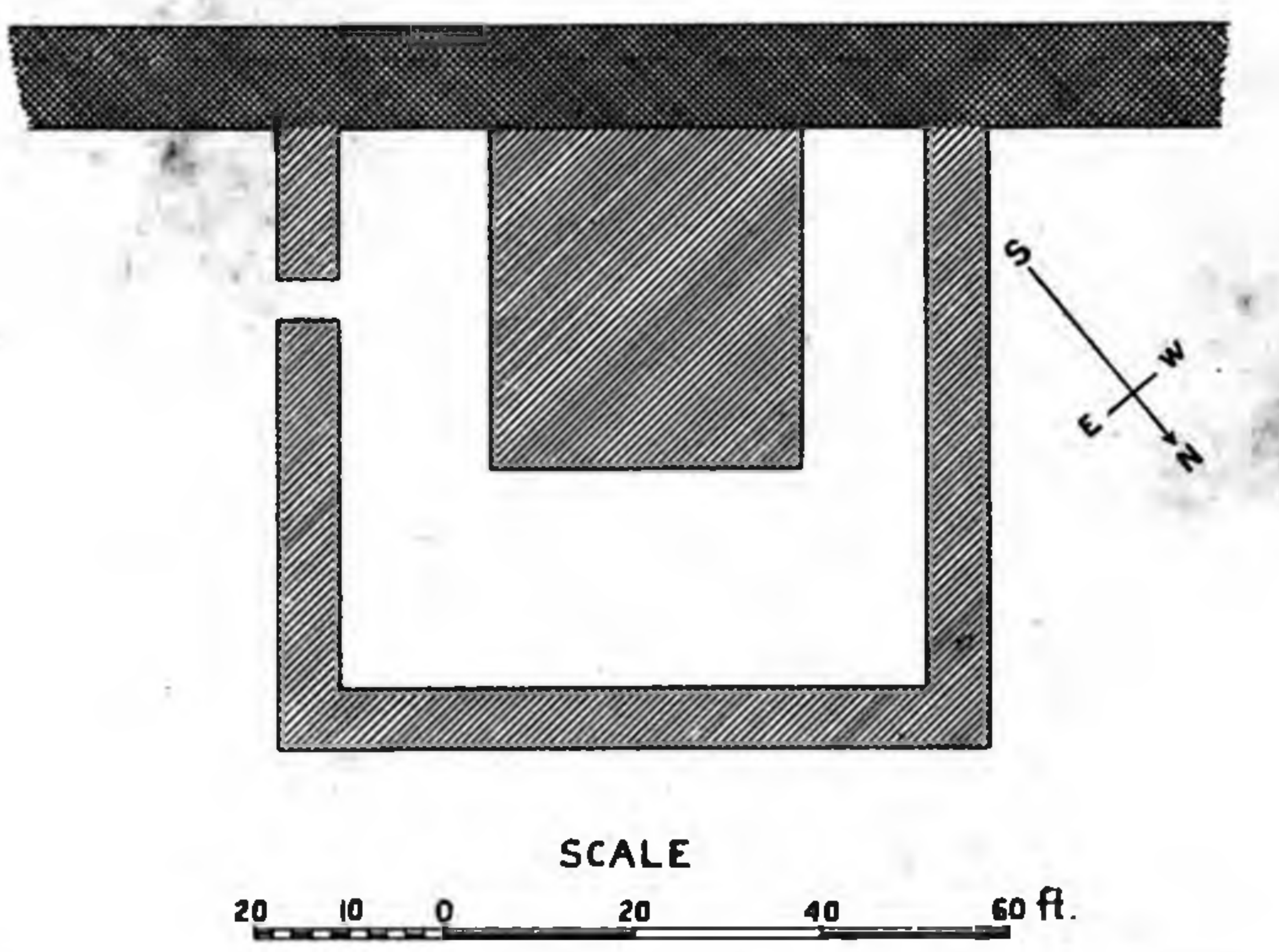
PLAN OF RUINED SHRINES, A. I, II, ARATAM, HĀMI.

Masonry of sun-dried bricks ....
ditto ditto broken ....
Statue base ....
Stūpa base cut from natural soil ....
Wall of stamped clay ....

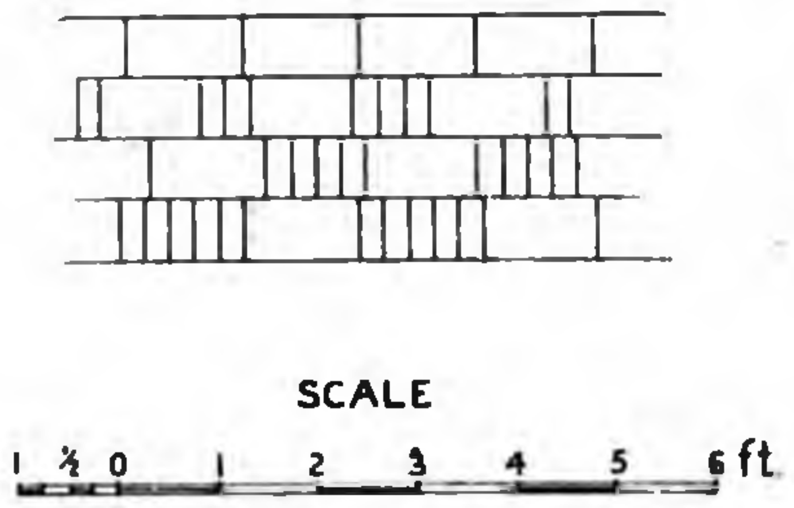




PLAN OF WATCH-STATION INSIDE EXTANT BORDER WALL, N. OF CHIA-YÜ-KUAN.

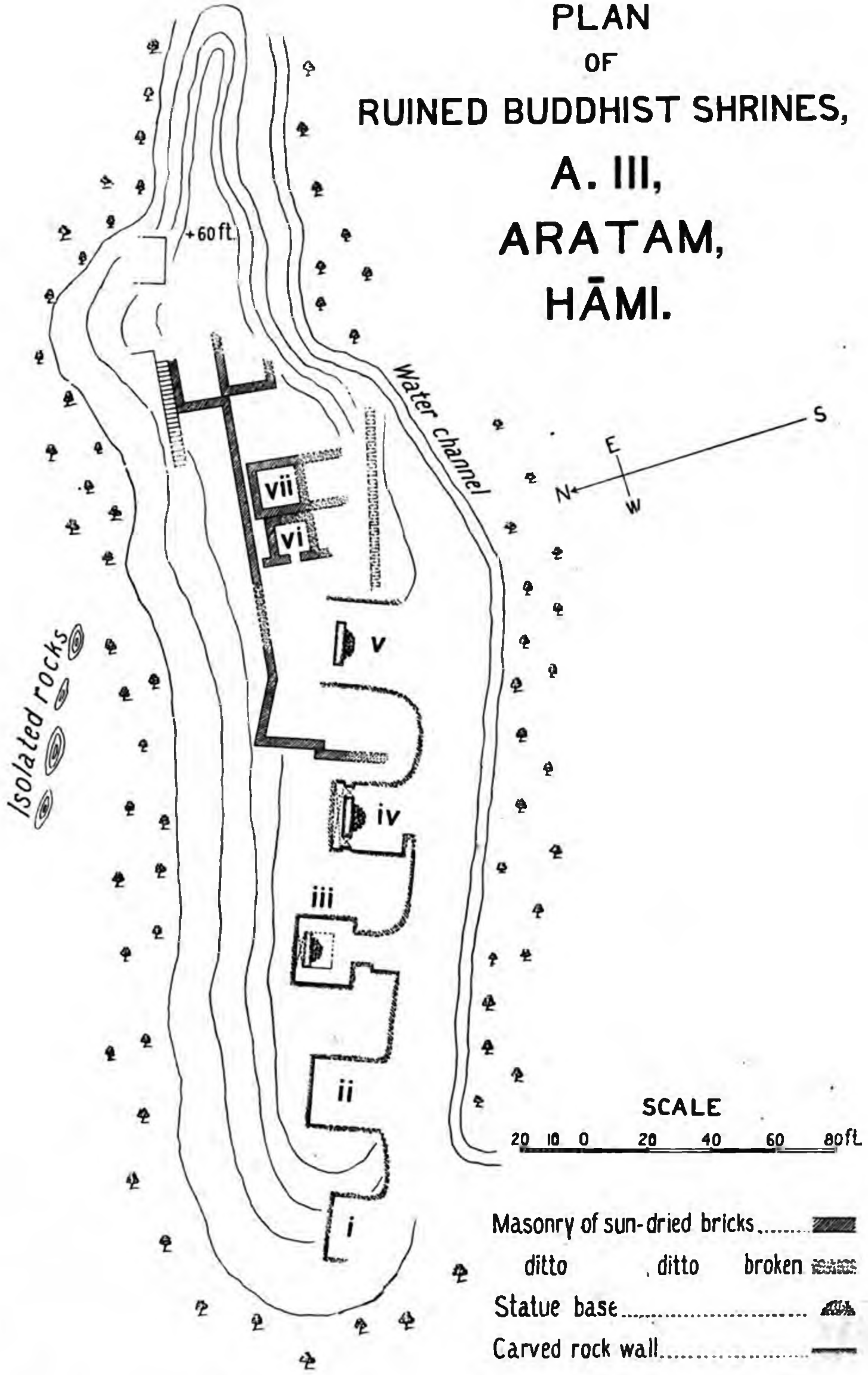


ELEVATION OF WALL IN SUN-DRIED BRICKS, AT RUINED SHRINE N. OF CHIN-T'A.



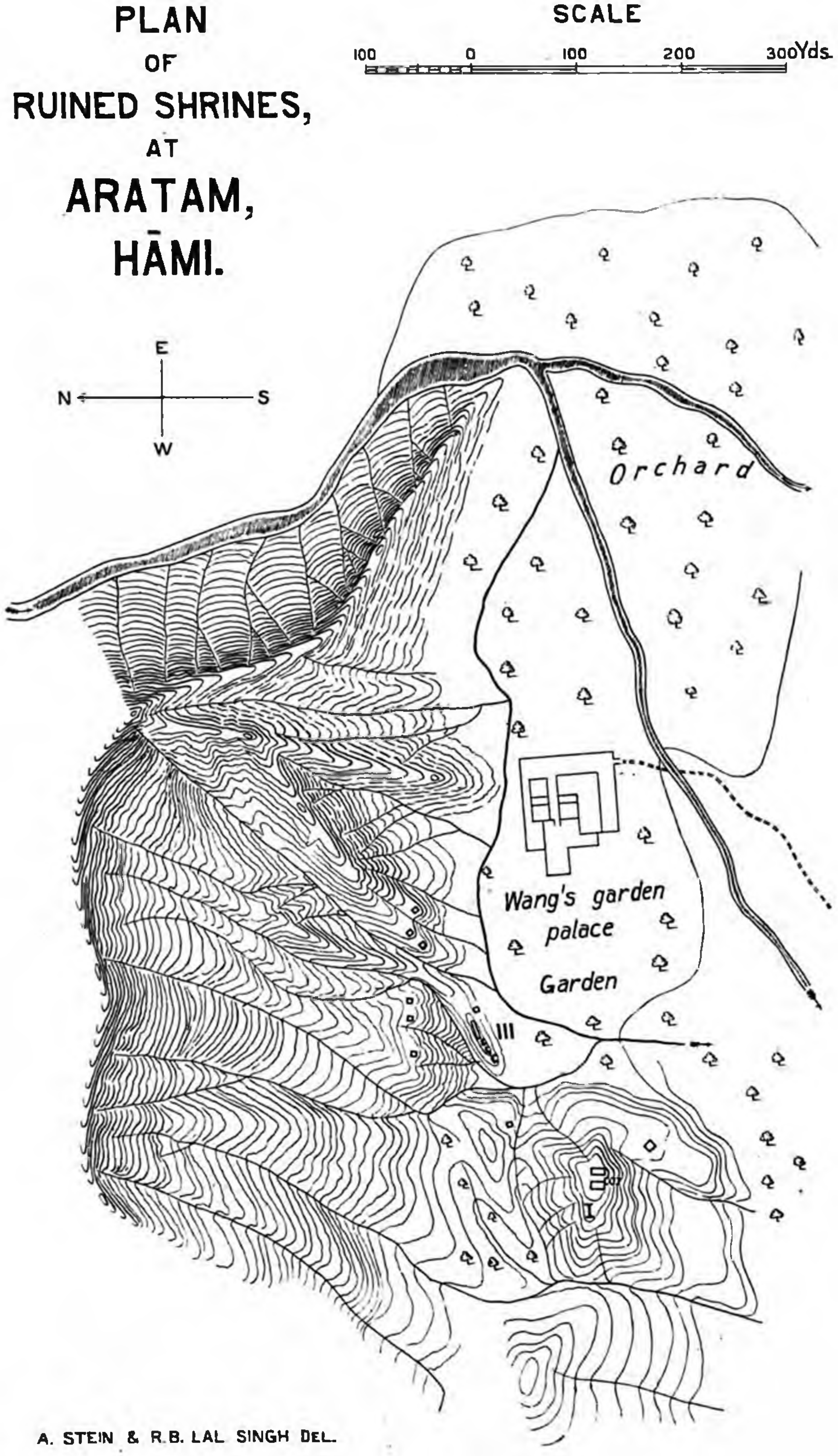
NAIK RAM SINGH DEL.

PLAN OF RUINED BUDDHIST SHRINES, A. III, ARATAM, HĀMI.



A. STEIN & NAIK RAM SINGH DEL.

PLAN OF RUINED SHRINES, AT ARATAM, HĀMI.



A. STEIN & R.B. LAL SINGH DEL.

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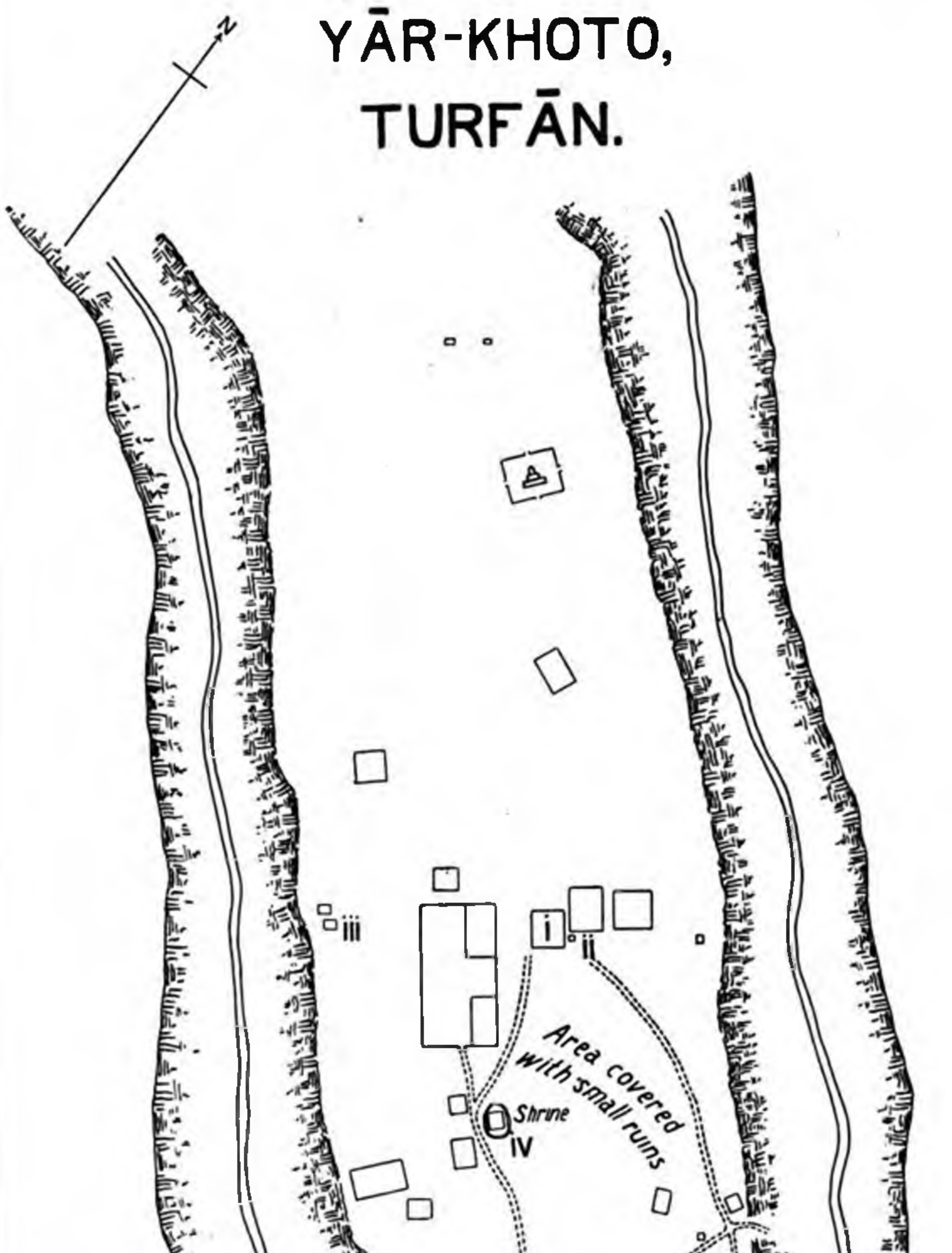
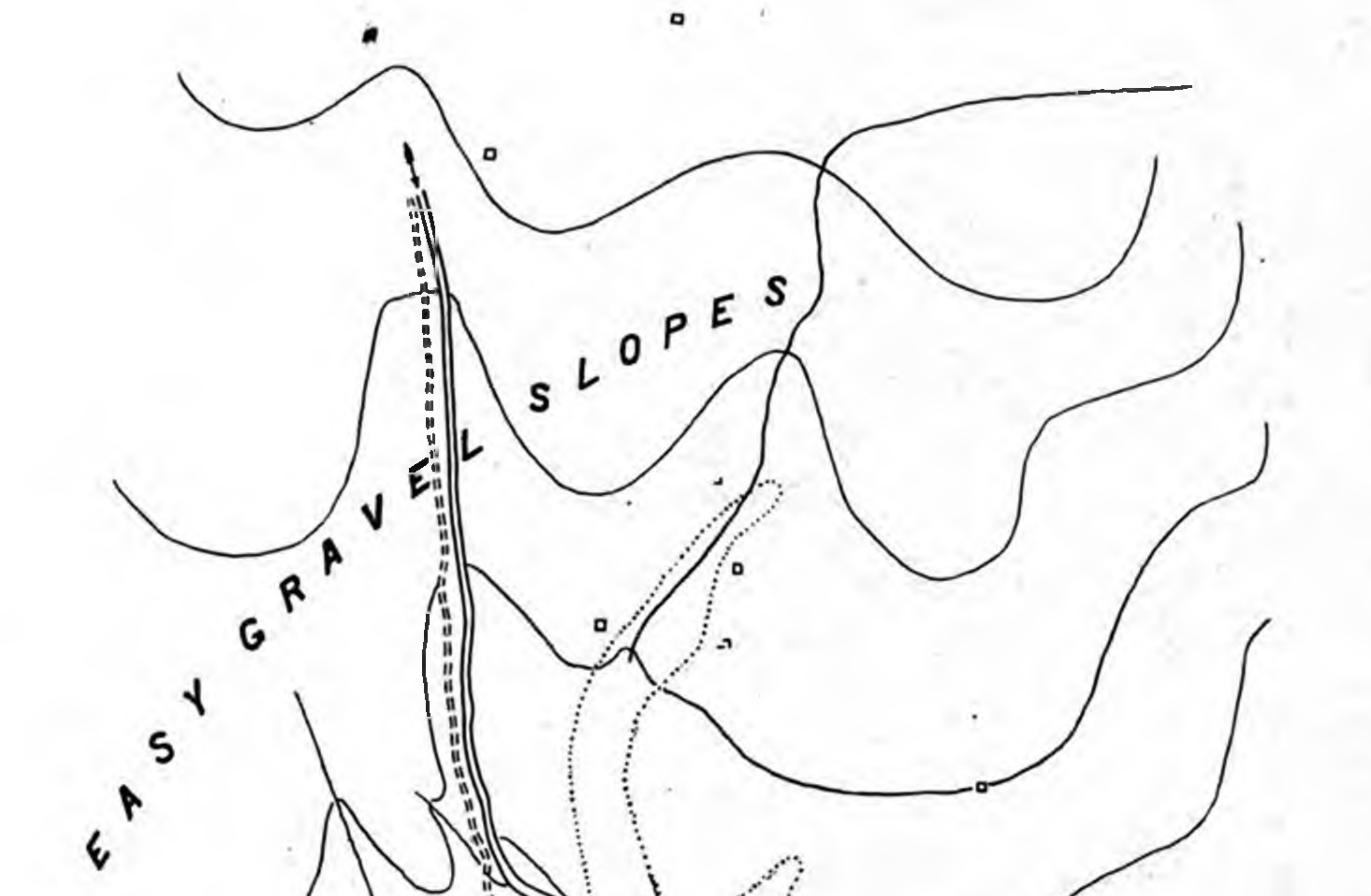
A
ROUGH SKETCH PLAN OF RUINED TOWN SITE OF
YĀR-KHOTO, TURFĀN.



B
SKETCH PLAN OF RUINS NEAR
LAPCHUK.

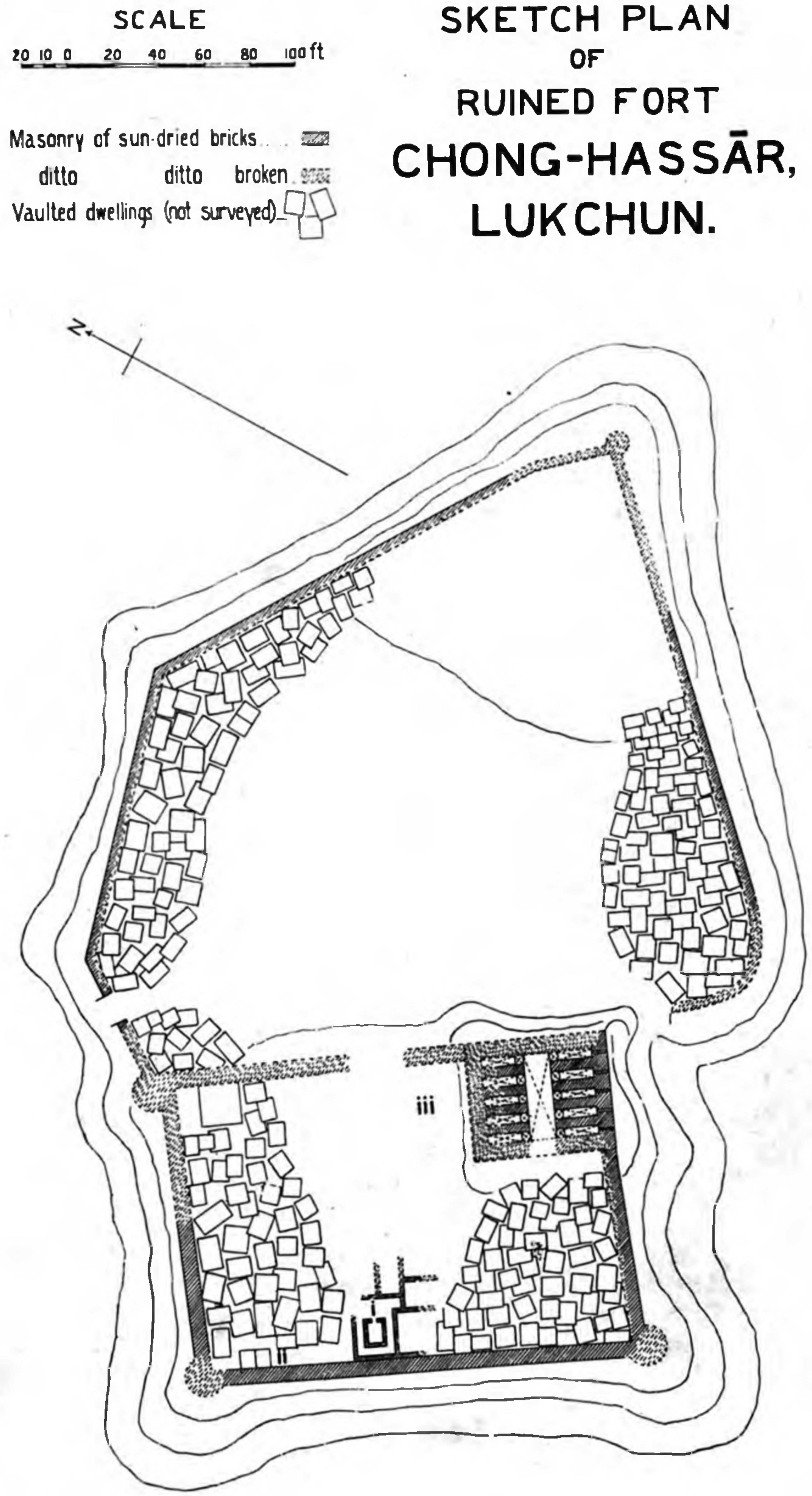
Ruined structure
Modern dwelling
Muhammadan cemetery
Cultivation

SCALE
200 0 200 400 600 800 1000 Yds.

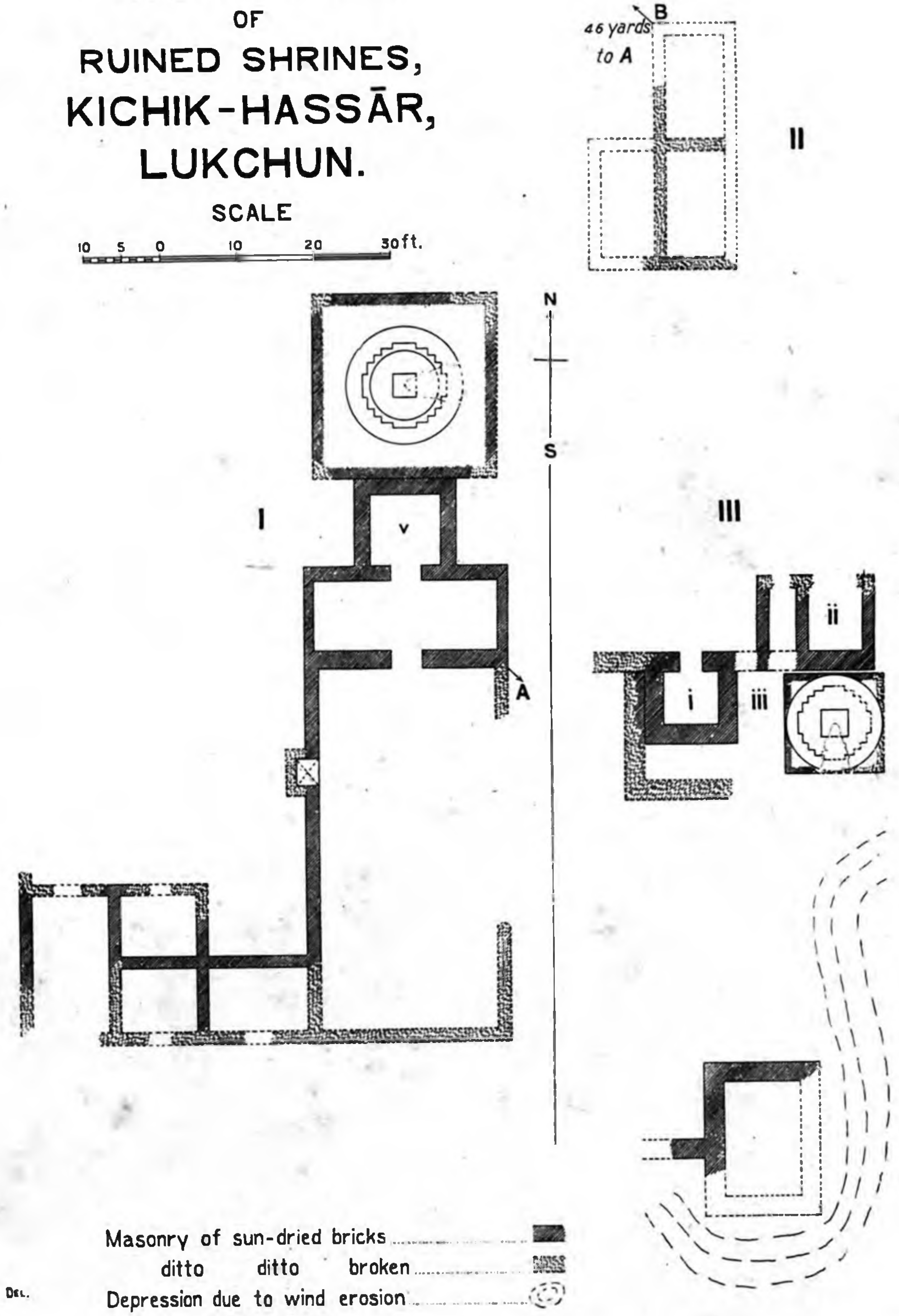


A. STEIN & R.B. LAL SINGH DEL.

SKETCH PLAN OF RUINED FORT CHONG-HASSĀR, LUKCHUN.



SKETCH PLAN OF RUINED SHRINES, KICHIK-HASSĀR, LUKCHUN.

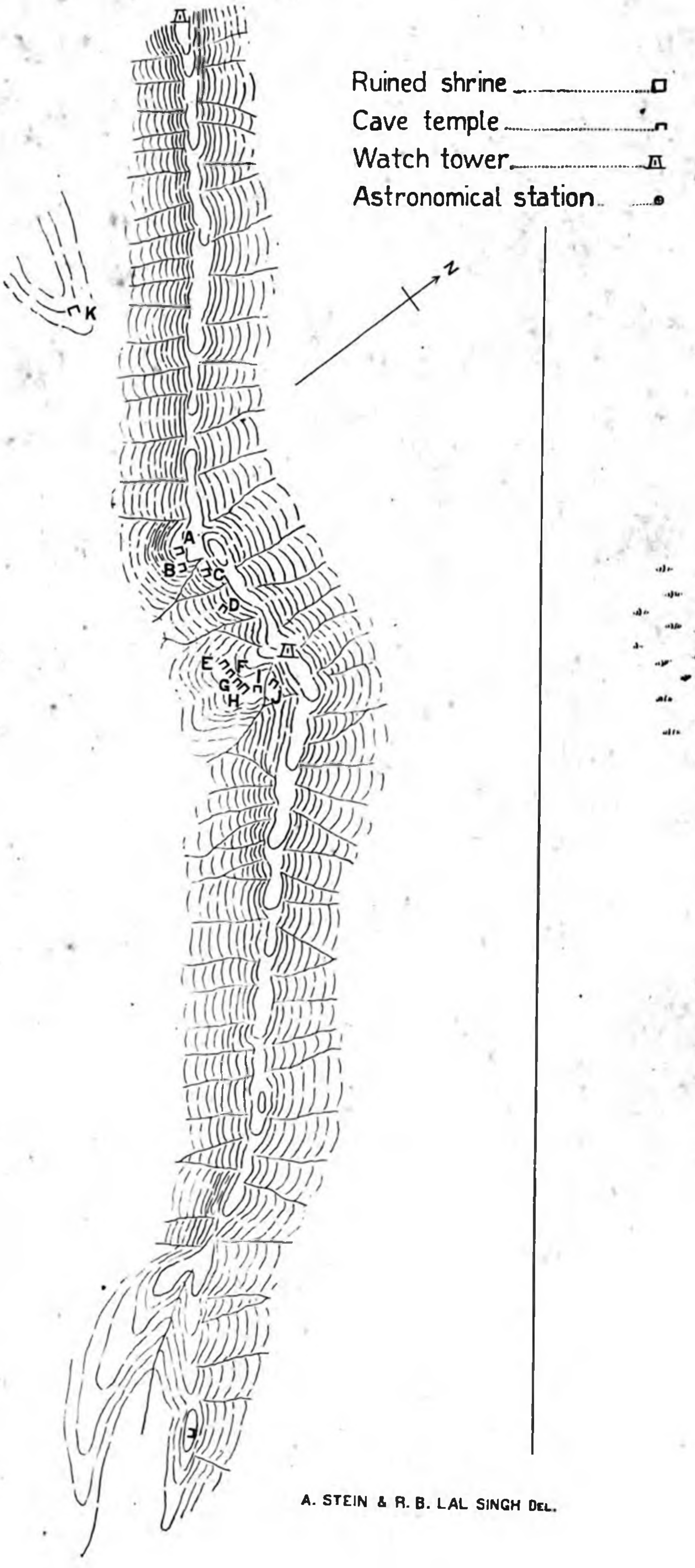


A. STEIN DEL.

PLAN OF CAVE TEMPLES NORTH OF 'MING-OI' RUINS.

SCALE

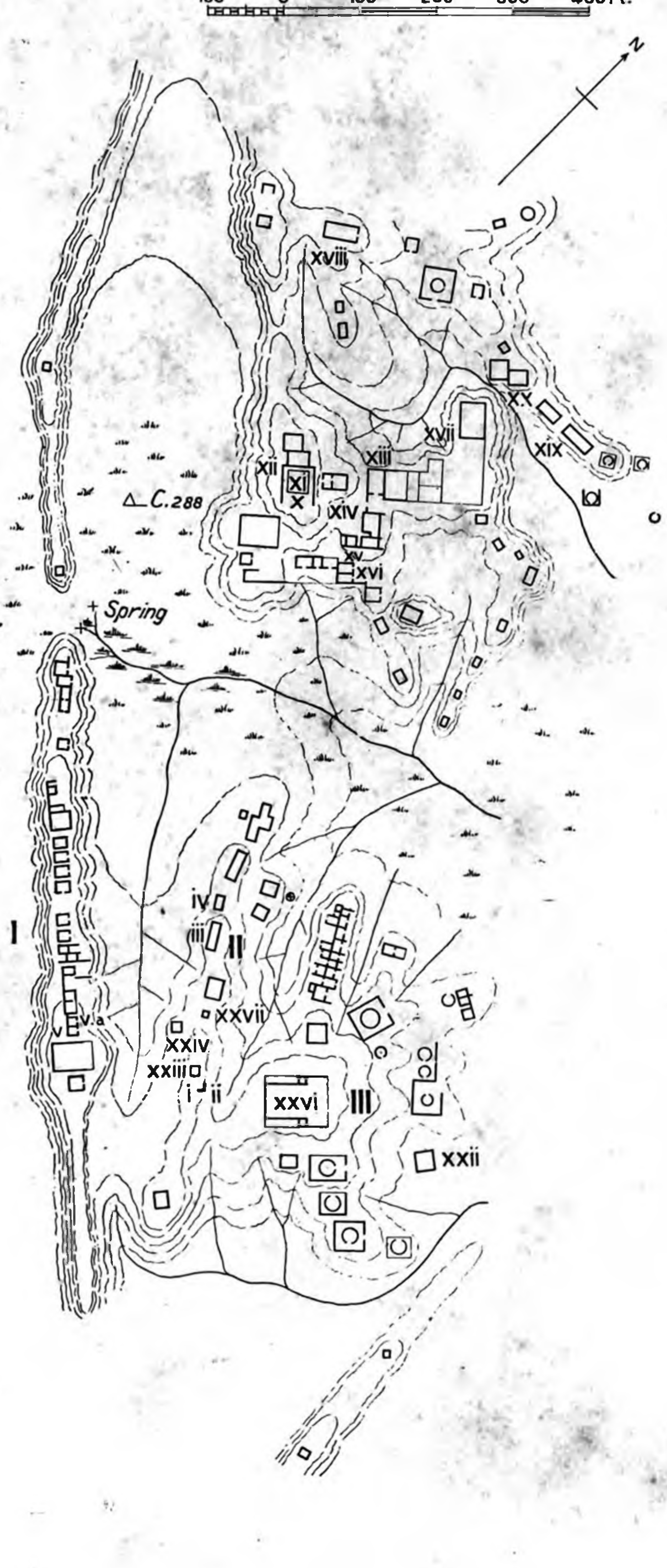
200 0 200 400 600 800 1000 ft.



SITE PLAN OF 'MING-OI' TEMPLE RUINS, SHIKCHIN, KARA-SHAHR.

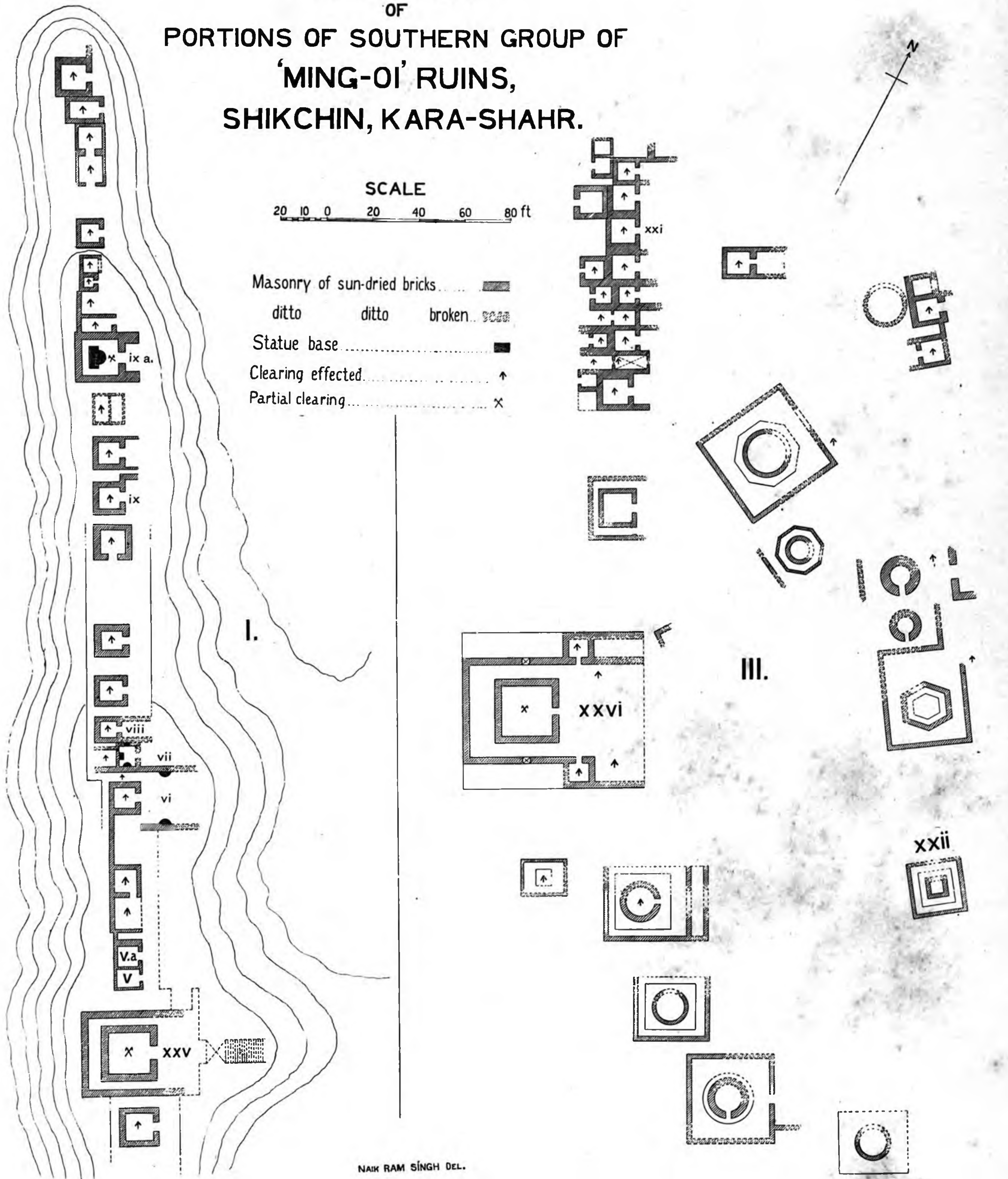
SCALE

100 0 100 200 300 400 ft.



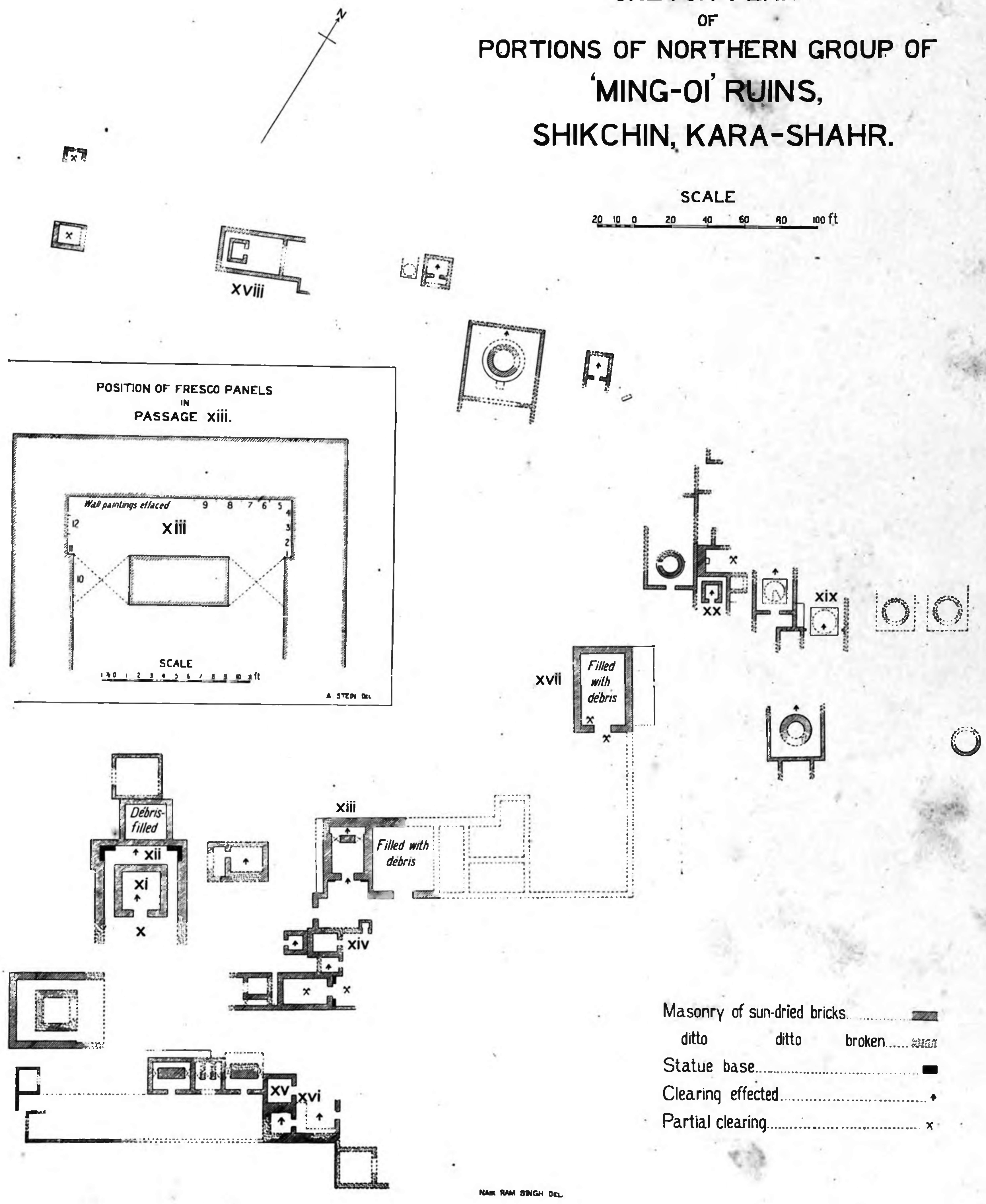
A. STEIN & R. B. LAL SINGH DEL.

SKETCH PLAN
OF
PORTIONS OF SOUTHERN GROUP OF 'MING-OI' RUINS, SHIKCHIN, KARA-SHAHR.



NAIK RAM SINGH DEL.

SKETCH PLAN OF PORTIONS OF NORTHERN GROUP OF 'MING-OI' RUINS, SHIKCHIN, KARA-SHAHR.

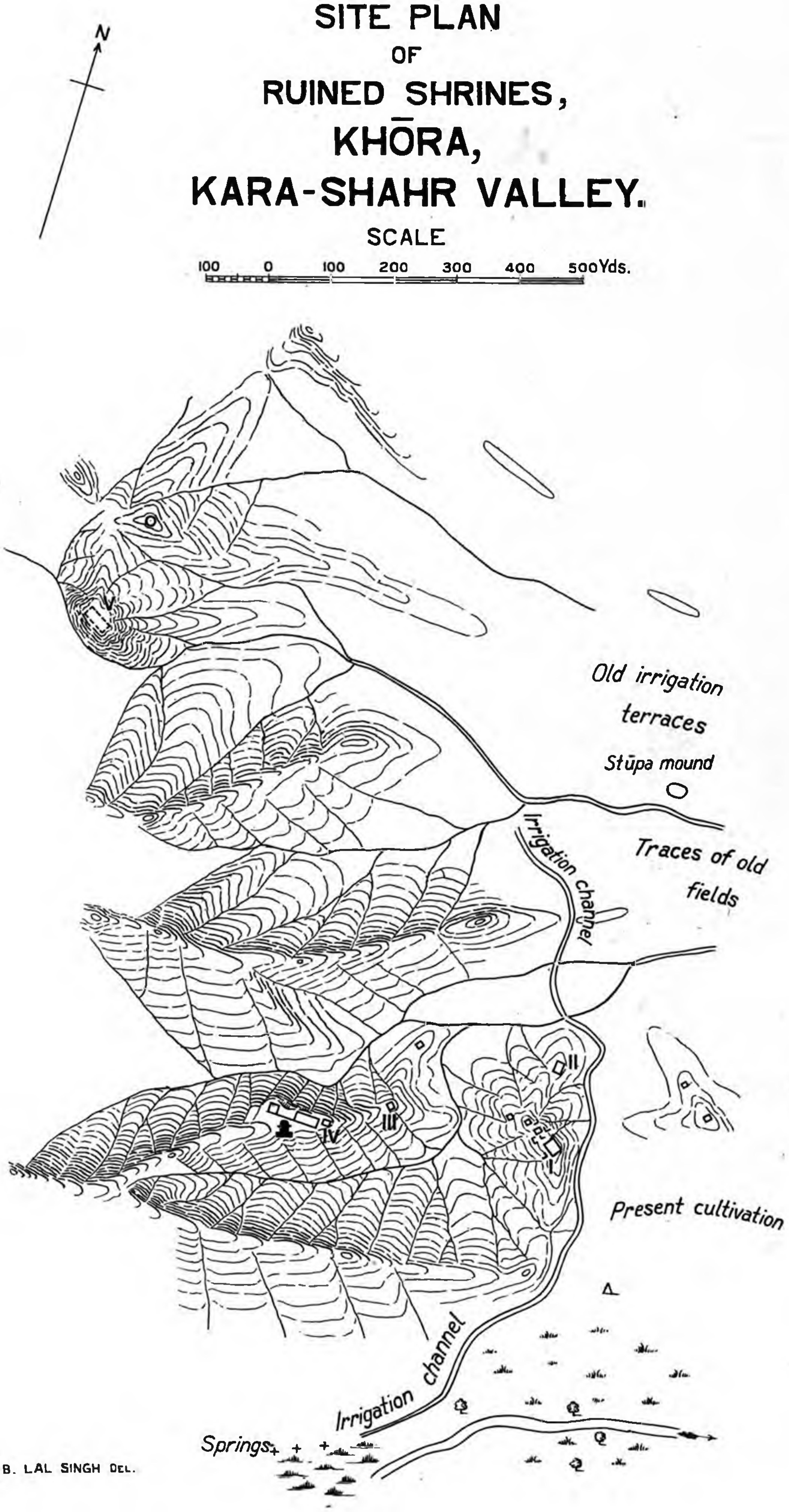


SITE PLAN OF RUINED SHRINES, KHŌRA, KARA-SHAHR VALLEY.

SCALE

100 0 100 200 300 400 500 Yds.

Ruined structure in sun-dried bricks .... ▭
Ruined Stūpa ....

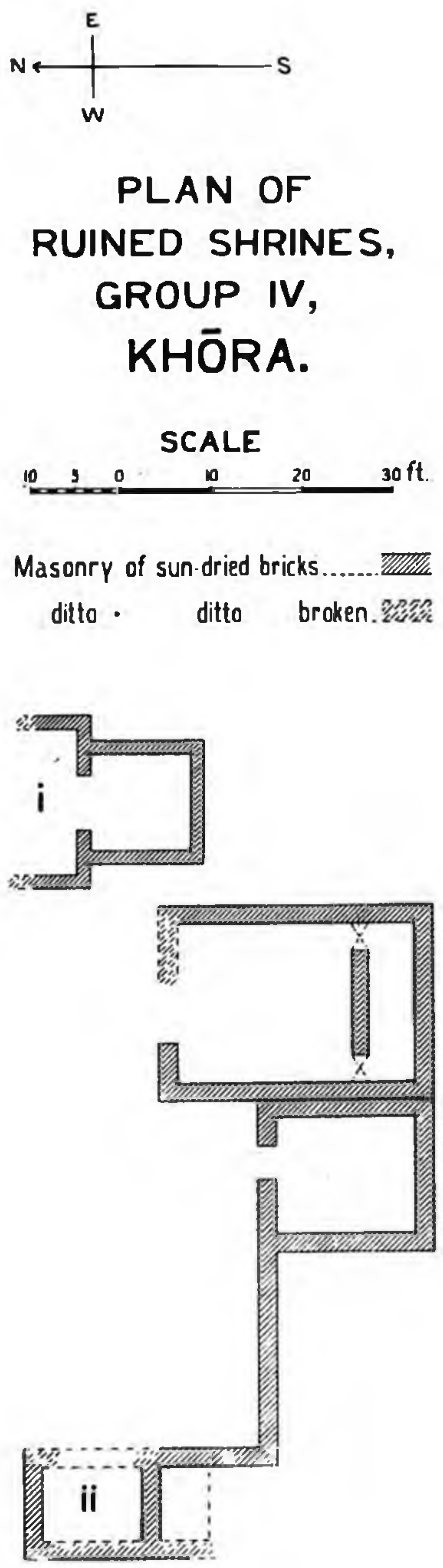


PLAN OF RUINED SHRINES, GROUP IV, KHŌRA.

SCALE

10 5 0 10 20 30 ft.

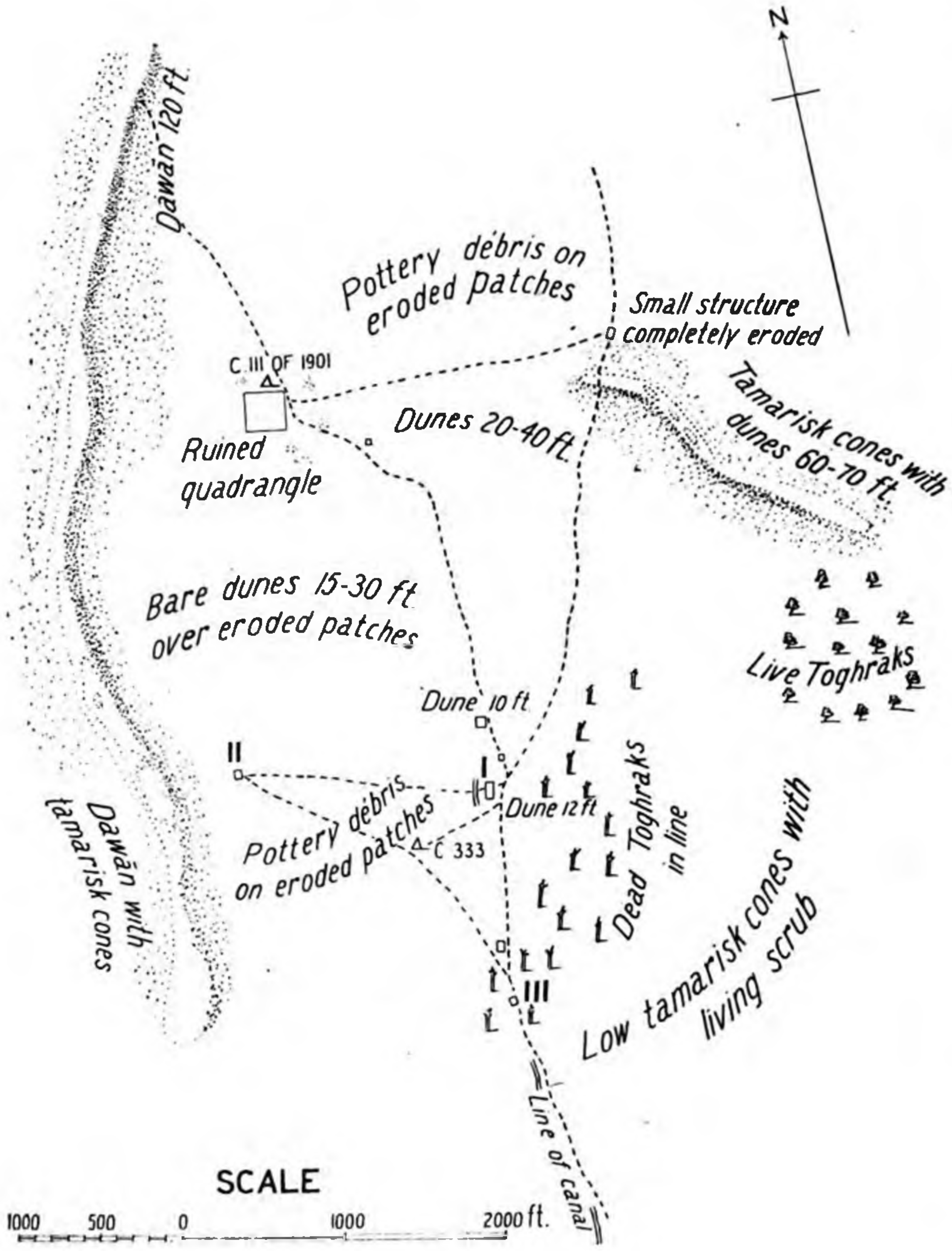
Masonry of sun-dried bricks ....
ditto · ditto broken ....



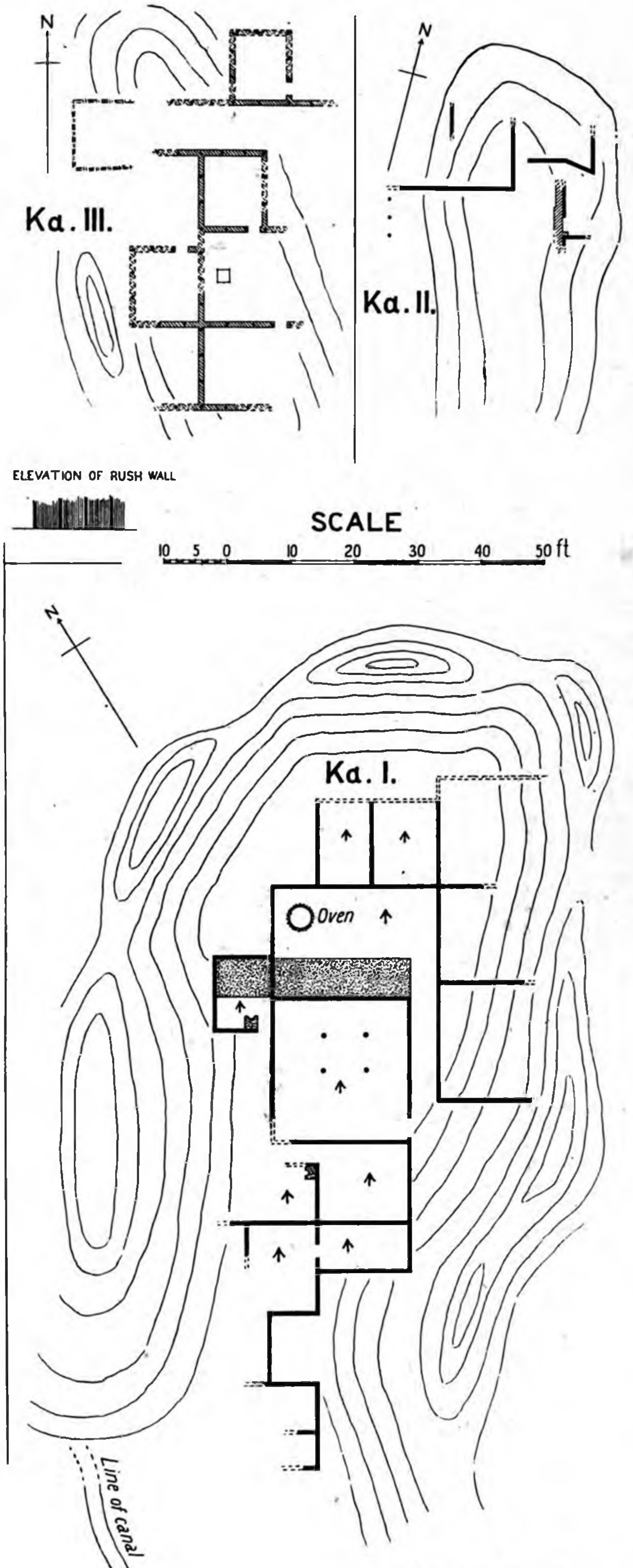
A. STEIN & R.B. LAL SINGH DEL.

PLAN OF SITE AND RUINED DWELLINGS OF KARA-DONG.

Wall of timber and plaster.
ditto ditto broken.
Rush wall with posts
ditto ditto broken
Platform
Masonry of sun-dried bricks

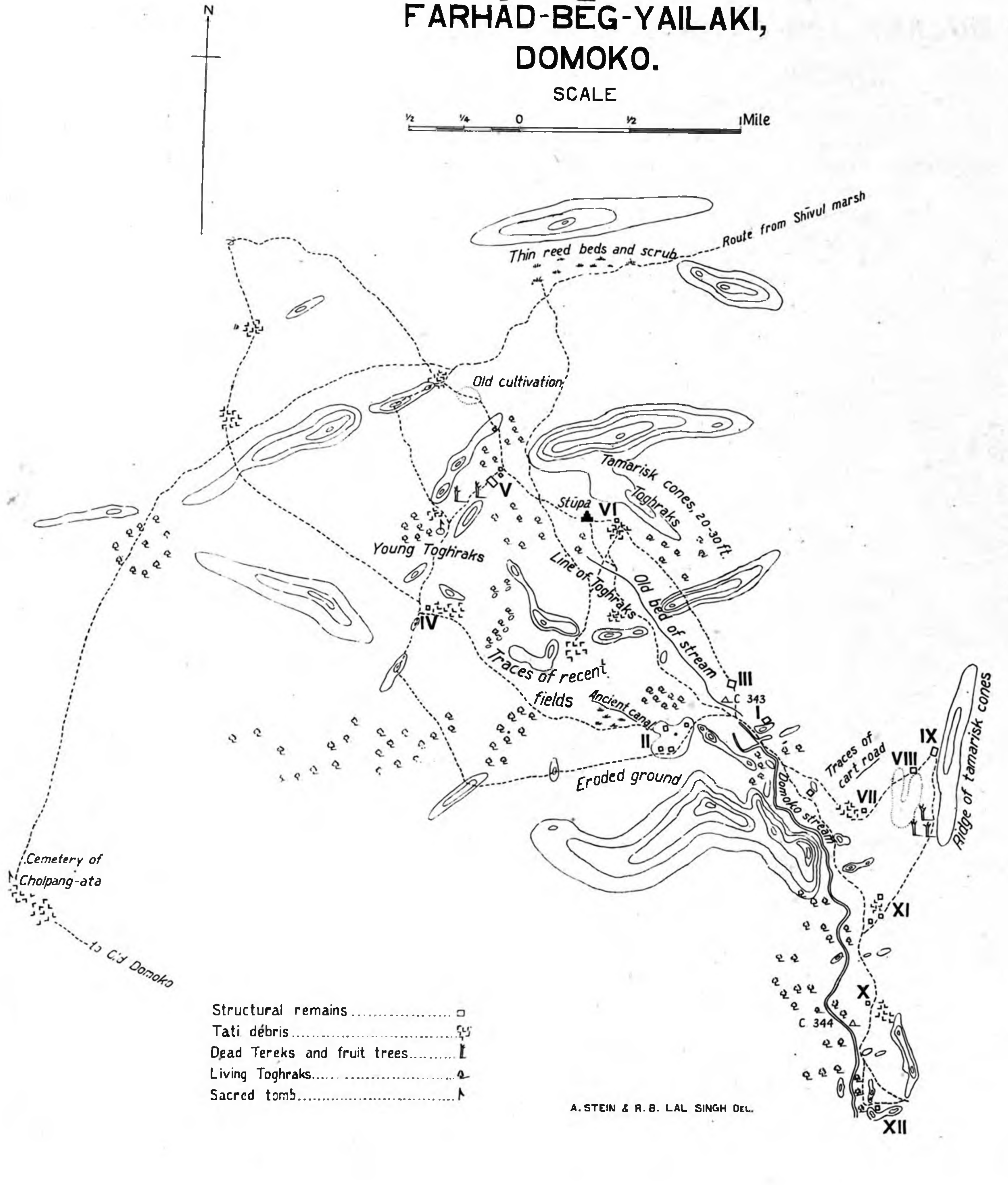


A STEIN & R B LAL SINGH DEL.

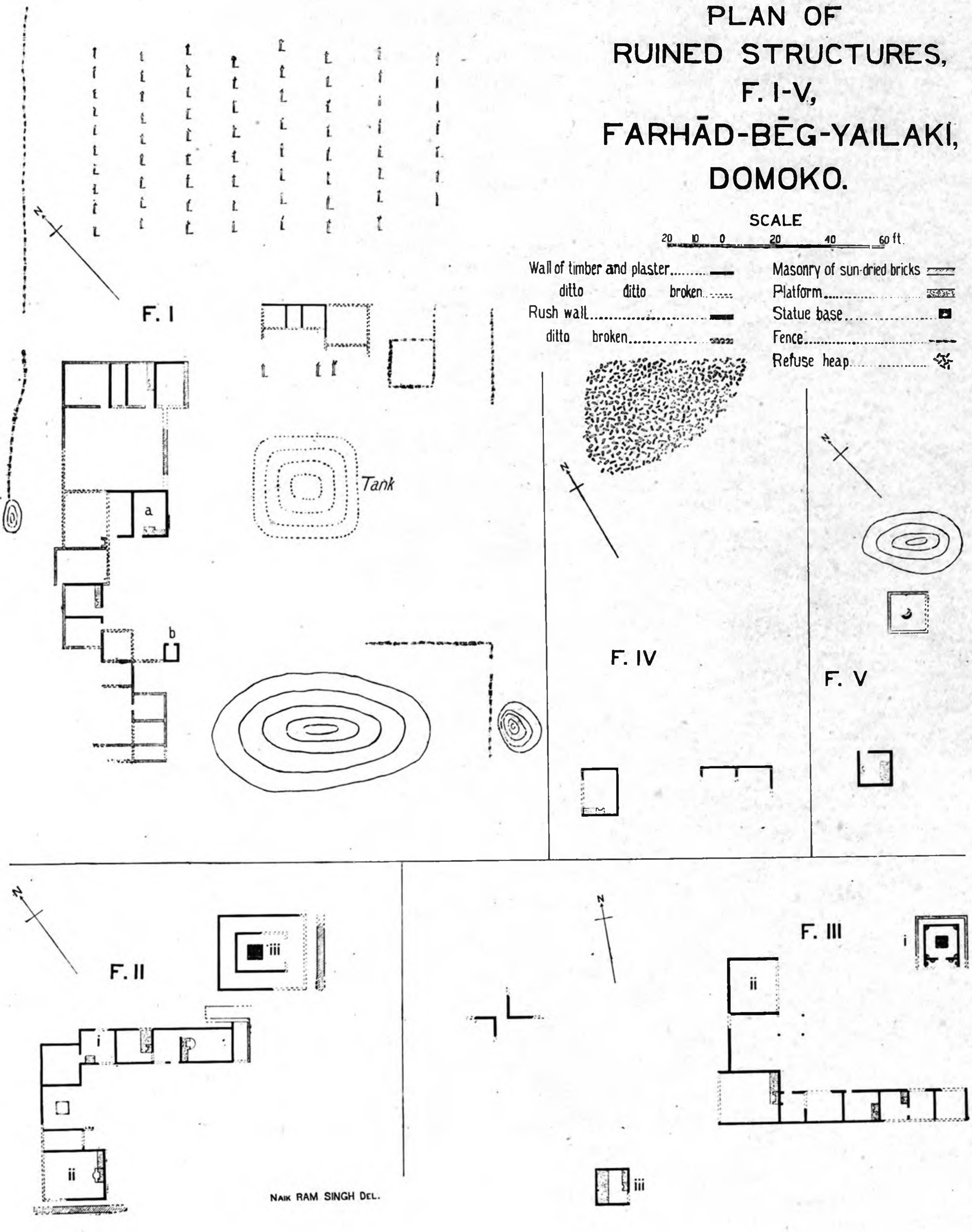


A. STEIN & NAIK RAM SINGH DEL.

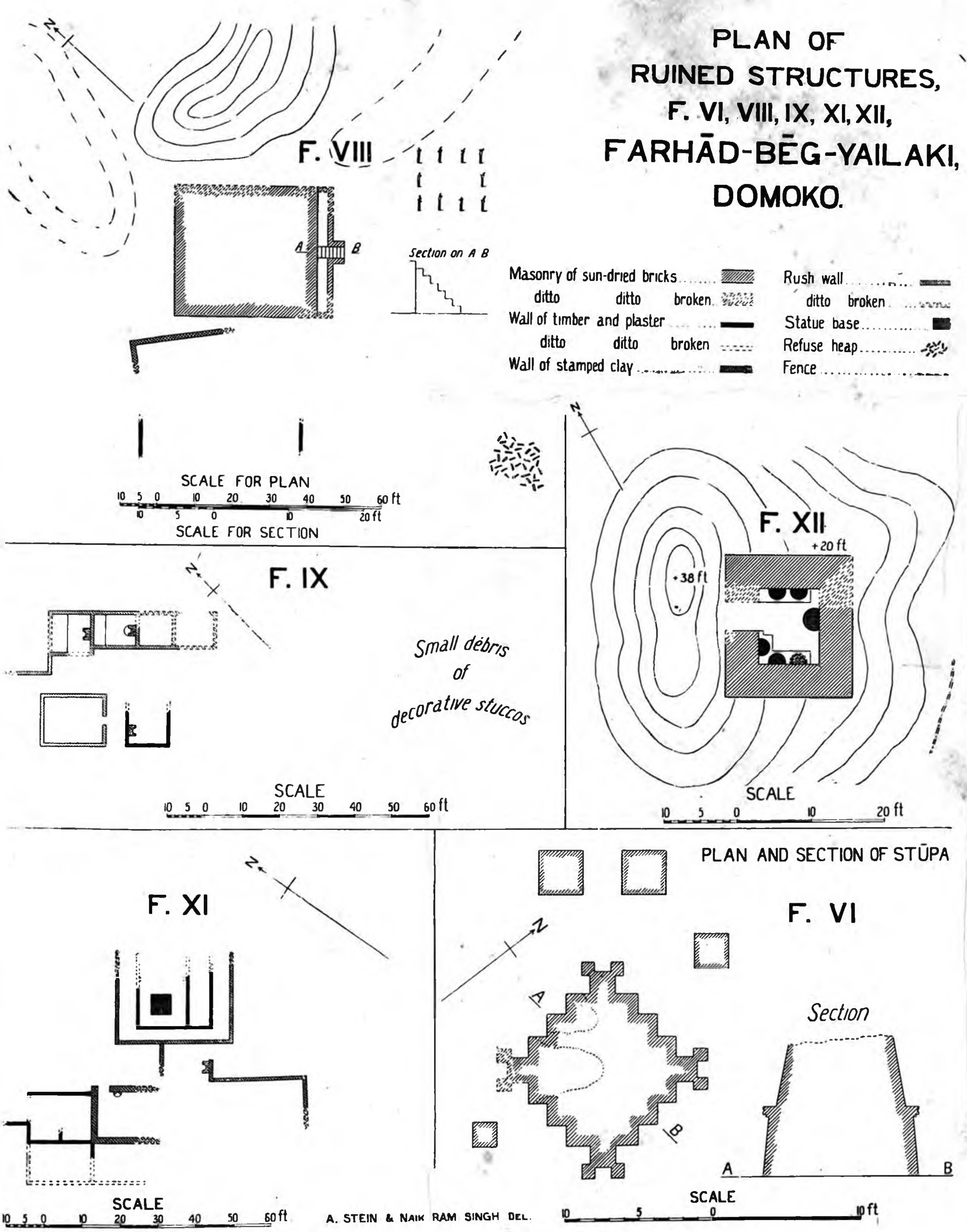
SITE PLAN
OF
ANCIENT REMAINS AT
FARHĀD-BĒG-YAILAKI,
DOMOKO.



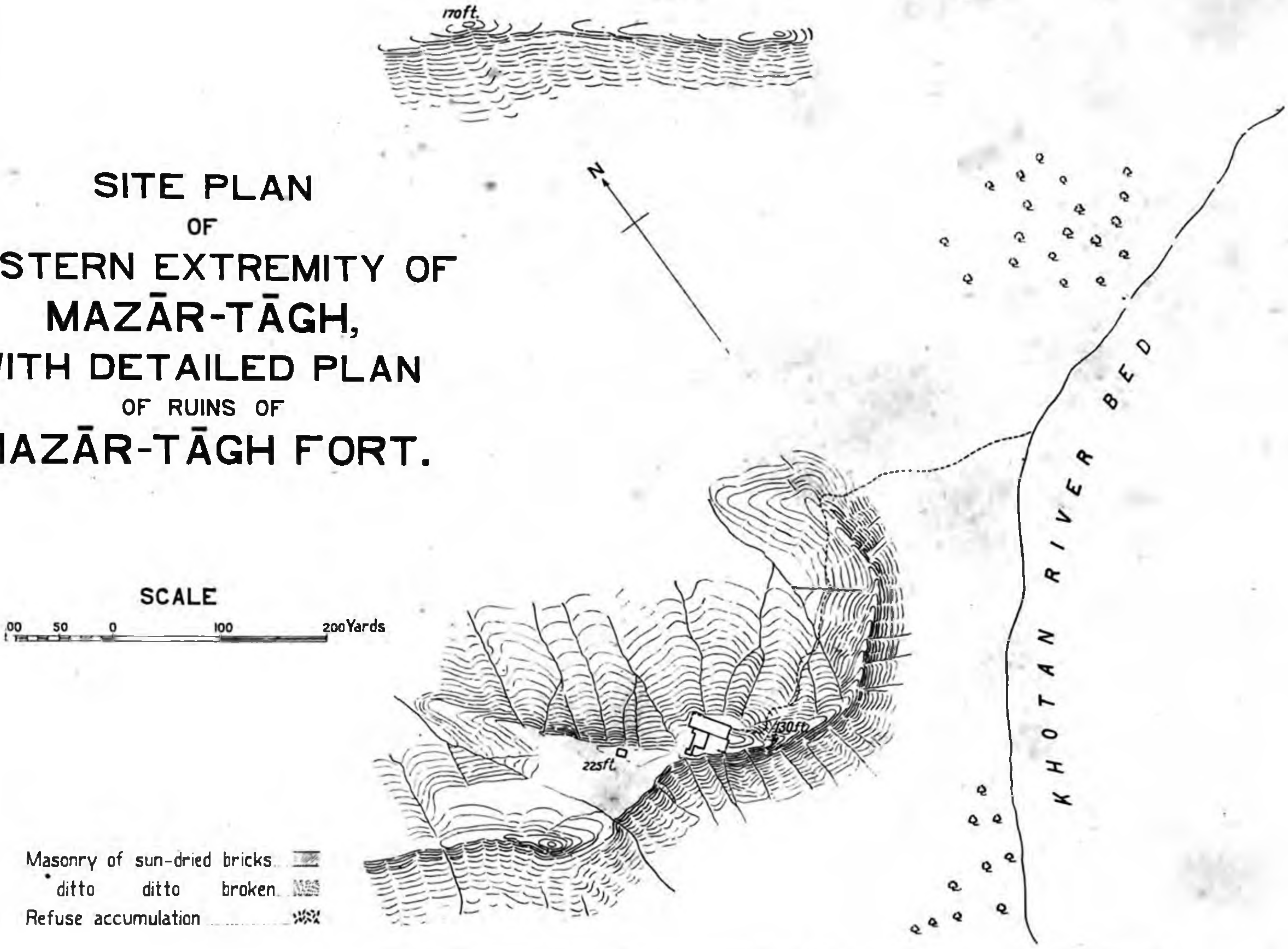
PLAN OF RUINED STRUCTURES, F. I-V, FARHĀD-BĒG-YAILAKI, DOMOKO.

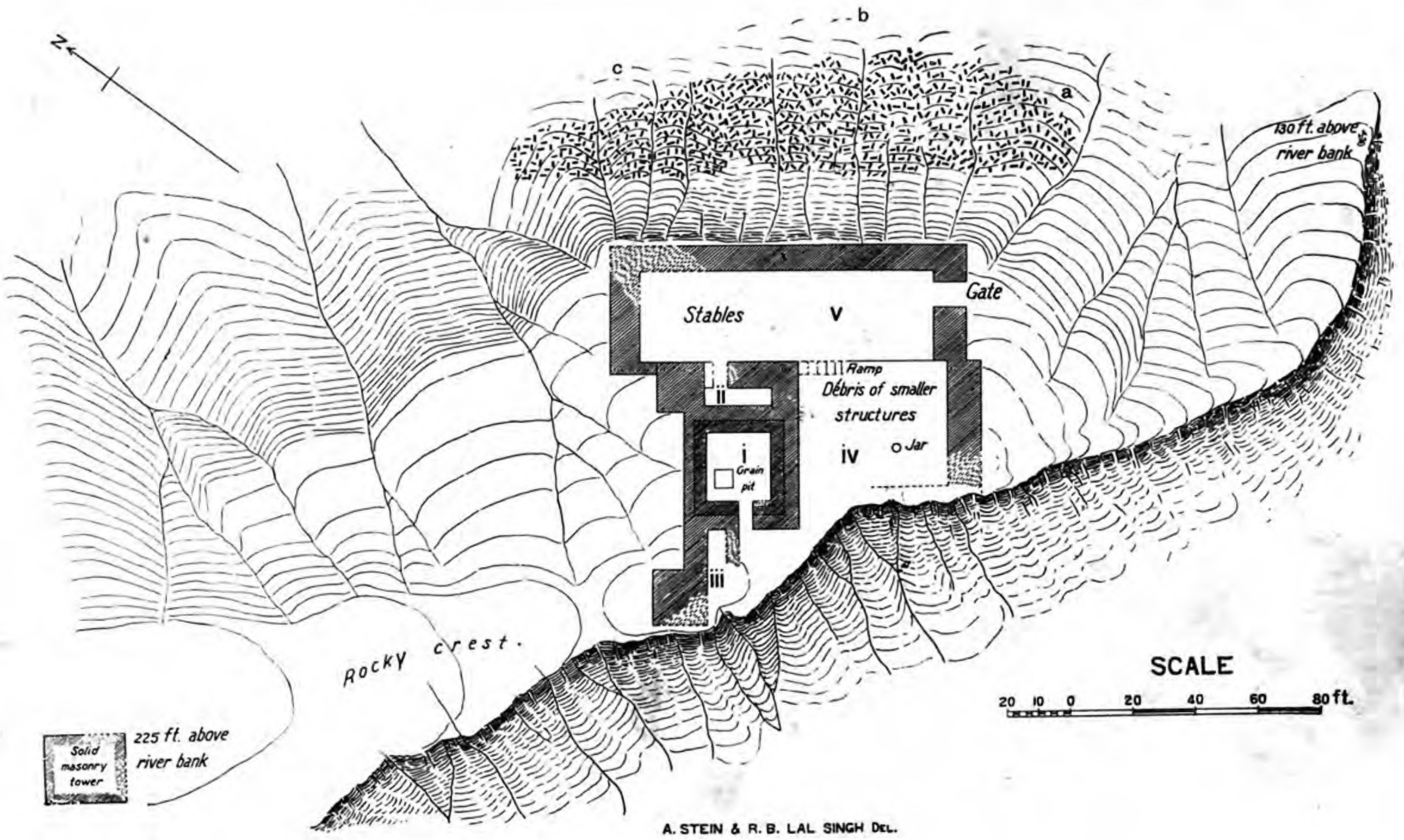


PLAN OF RUINED STRUCTURES, F. VI, VIII, IX, XI, XII, FARHĀD-BĒG-YAILAKI, DOMOKO.



SITE PLAN OF EASTERN EXTREMITY OF MAZĀR-TĀGH, WITH DETAILED PLAN OF RUINS OF MAZĀR-TĀGH FORT.





A. STEIN & R. B. LAL SINGH DEL.